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PROGRESS AT THE LEAGUE

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WITH increasing truth Geneva might be called the nerve centre of mankind. Human impulses from every corner of the globe move toward it—are received, codified, refined and presented back to the world as an effort toward the improvement of life. Imperfect as some of the recommendations may be, unworkable as others may develop, the desire and tendency is still toward stabilization; and everywhere men of good will must consider that League policies are constructive policies.

It is under this heading that the world important subject of calendar reform receives serious and impartial treatment. Fifteen years ago sufficient progress had been made by the advocates of a simpler calendar to draw to it the attention of Geneva. The 1923 and 1931 discussions that followed were so full that hundreds of suggested calendars were considered. The League narrowed the inquiry down to two only and now the time has come to take still another step forward.

Both plans approved as possible of acceptance are too well known to need more than mention by name—The Fixed Calendar of 13 Months and The World Calendar where balance is obtained through equal quarters. Both are perpetual, each year exactly comparable with all future years.

The plans have been before the world for more than a generation and,

during the past five years, have had intense propagation. To Geneva has come the result—waves of public reaction that are measurable. Like water finding its own level, the two plans have developed in overlapping and significant spheres of usefulness. The twelve-month World Calendar has appealed to wide, almost universal, public opinion; the 13-month scheme has become highly specialized.

This specialization has concerned itself with the exact accounting systems of certain modern businesses. By all pure mathematical logic, it is the better plan of the two—but alas! we are not creatures of logic. The 13-month calendar makes a beautiful picture. Each month has four weeks of seven days—a complete little unit in perpetuity that lends itself remarkably to commerce.

In its rigidity, in its very name “fixed,” it errs against human behavior. For all ordinary purposes its number “13” is the most awkward of figures. Laugh as we may at superstition—it cannot be discounted as one of the world’s greatest forces. Except for business the 13-month calendar has not been accepted. And, gradually, its sponsors have realized its changed status and are now sensibly developing it in that field.

The appeal of The World Calendar may begin with the fact that the months are retained, the seasons stabilized and the whole structure of the year balanced within the framework of a simple and easy system designed in the interests of all classes of a vast world public.

The details are not unalterably fixed. The master plan calls for a calendar of twelve months with equal quarters and an even half year. Actual adjustments to achieve perpetuity are suggested but will be arranged by consultation and agreement. This reasonable attitude by advocates who serve no special interest has done much to win consideration by the world at large.

I will do no more than recount some of the reaction that has reached Geneva. The appointment of a date for the celebration of Easter—one that will not change from year to year—is an integral part of any proposal for calendar reform; on that, many bodies base their support. As far back as 1928, the Parliament of Great Britain passed its Easter Act stabilizing this sacred period; the beginning of legislative action for a balanced calendar. The forty-four nations in conference in Geneva in 1931 followed Britain’s lead in a “no declaration” policy regarding the merits of adoption of calendar reform generally, but the four greatest countries of Europe opposed the 13-month scheme.

Since then the British Parliamentary Committee on Calendar Reform, London Chamber of Commerce, the Powerful Trades Union Congress and the Church of England have firmly favored revision. The German government, through its Ministry of the Interior, has declared (1935) for reform, providing the familiar twelve months are retained.

In North America, calendar reform has wide general approval—particularly The World Calendar plan. South America and its sister states in Central America have been even more active from an official point of view. The numbers of official committees and the distinguished names they include make an impressive array. Represented are the Argentine Republic, Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico, Panama, Peru, and Uruguay. In the latter nation as recently as January of 1936, President Terra has offered his cooperation.

The churches of the world, because of their feast and special observance days, are intimately concerned with the problem of simplification. Representing the Protestant Churches, the Universal Christian Council for Life and Work meeting in Denmark in 1934 passed a resolution supporting calendar reform and urging action by the various governments. This body is strongly represented at Geneva.

If the almost solidly Roman Catholic nations of Latin America can be used to indicate an example, it can be confidently expected that full support, in due time, will be forthcoming from the Vatican.

The question will again be examined at the League—sympathetically and impartially. Recommendations will follow the wishes of the delegates in conference. After that remains agreement—for it can be taken as certain that nothing can stop the impetus of this movement. Agreement will be directly the business of the nations endorsing reform—and a difficult business, but the urge to simplify and balance man's arbitrary division of time will probably solve the problem in the modern way. That is, speedily.

OBITUARY NOTES

DR. JAMES HENRY BREASTED, director of the Oriental Institute of the University of Chicago and for many years one of the greatest authorities on the history of the calendar, died in New York on December 2. His most recent contribution to calendar research was a lecture on "The Beginnings of Time-Measurement and the Origins of our Calendar," delivered on the James Arthur Foundation at New York University on May 16, 1935. The text of his lecture will be published in a forthcoming issue of the *Journal of Calendar Reform*.

JOHN J. GLESSNER, one of the founders of the International Harvester Company, died on January 20 at the age of 93 years. He had been a member of The World Calendar Association since 1933.

DR. CHARLES CARROLL, Supervisor of Public Education in Rhode Island, died in his 60th year on February 4. Early in 1933 he became a member of The World Calendar Association.

CHRISTIAN B. ZABRISKIE, former president of the Pacific Coast Borax Company, died on February 8. As a member of the New York State Chamber of Commerce, he became interested in the Chamber's leadership in calendar reform, and joined The World Calendar Association in 1935.

GEORGE SEYMOUR GODARD, Connecticut State librarian for 35 years, died on February 12. Past president of the National Association of State Librarians and president of the American Association of Law Librarians, he was 71 years of age. He was one of the early members of The World Calendar Association.

HOUSE OF LORDS DEBATE

In the British House of Lords, on March 4, 1936, the subject of calendar reform was brought up on a motion by Lord Merthyr, whose opening speech urged the government "by their interest and action" at the League of Nations, to render this reform possible in 1939. Notable speeches followed from Lord Desborough and the Archbishop of Canterbury, both supporting revision of the calendar. Finally the government spokesman, Lord Feversham, replied for the government, promising definitely that "if the matter is placed on the Agenda of the approaching meeting of the League Commission on Communications and Transit, the whole question will have the most sympathetic and serious consideration of the representatives of His Majesty's Government." The following textual account is slightly abridged from the official report.

(Footnotes by P. W. Wilson, former member of Parliament from St. Pancras, London)

LORD MERTHYR rose to ask His Majesty's Government whether it is proposed to take any steps to accelerate, at the forthcoming meeting of the Transit Section of the League of Nations, the adoption by international action of a fixed calendar; and to move for Papers.¹ The noble Lord said:

"My Lords, in asking the question which stands in my name this afternoon, I do not propose to weary the House with all the possible arguments in favor of a reform of the calendar. In the first place it would take a long time, and in the second place I doubt whether they would be, all of them, strictly relevant to the particular Question that I have put down.

"But I want, if I may, to put forward a sufficient number of those arguments to justify my plea that His Majesty's Government should take action at Geneva in the near future. One obvious reason for international action is that it is not desirable that one country should have a different calendar from its neighbors, although that was the case for great periods in the past, and the immediate cause for this demand for Government action is that there is taking place this year at Geneva a meeting of the section of the League of Nations devoted to communications and transit.

"One of their quinquennial meetings takes place next October. I wish to urge His Majesty's Government, first of all, to see that this matter of calendar reform is placed upon the agenda; and secondly, to instruct a representative to attend this meeting and to put forward the views of this country upon that question.

"There is some little urgency about this matter in the minds of those who want reform, because the calendar can only be reformed in the way

¹ Baron Merthyr of Senghennydd in Glamorganshire—William Brereton Couchman Lewis—was educated at Eton and Magdalen College, Oxford. He is Honorary Treasurer of the University College of Wales and the Archbishop of Wales is his uncle by marriage. . . . According to Parliamentary procedure in Great Britain, "moving for papers" is a formal manner of initiating a discussion. Such a motion means that the subject is in order for discussion but the motion expresses no view of the subject, either favorable or otherwise.

they desire in a year when the first day of January falls upon a Sunday. The next year when that happens is 1939, and if we miss the opportunity in 1939 there will not be another until 1950.

"Perhaps I may remind your Lordships for one moment of the history of the matter of the calendar. It starts with the Julian Calendar, which was altered by the Emperor Augustus, who was sufficiently vain to wish a day to be taken out of February and placed in August merely because his birthday happened to fall in that month.² I would ask your Lordships to think of the sum total of inconvenience which the people of the world have suffered because of that fact 2,000 years ago.

"Then, in the year 1582, the Gregorian Calendar was instituted. But it was not until 170 years later that England summoned enough courage to alter her own calendar to conform with it. In 1835 the proposal was first made for a calendar of 13 months—a proposal which has received much attention during the past hundred years, which has caused a great many conferences to be held and a great many societies to be formed, and which is one of the subjects demanding attention today. There have even been Bills presented in Parliament towards this end.

"What is wanted now is a lead from His Majesty's Government—a lead at Geneva, and a lead, if I may respectfully say so, a little different from that which was given in the year 1931, when the Transit Section last met. At that meeting a representative of the British Government attended, and, without in any way wishing to criticize him as an individual, I would like to say that the attitude which he was no doubt instructed to take at that meeting did not inspire confidence in those who want this reform.³ He, it seems to me, climbed very high upon the fence of doubt and indecision. I may perhaps quote some words of the official representative of His Majesty's Government, in 1931, from which it is not surprising, in my humble view, that this Conference reached no decision. He said:

The vote which had just been taken would not be of any help to Governments in forming an opinion. He himself had not been able to do anything else but abstain because if he had said Yes, that would have implied that he agreed that there were advantages, and if he had said No, that would have implied that he agreed that there were no advantages. As far as he was concerned, neither of these indications would have been true.

"I submit that this was not a constructive or hopeful statement, and I ask that in 1936 something more definite may go from here to Geneva. Because there is evidence to show that the rest of the world desires and expects a lead from this country. Those members of the organizations concerned who travel in the world experience this sort of statement: 'If only your Government would do something about this we could get on

²This is the traditionally accepted view of the matter. Later research has thrown doubt on the responsibility of Augustus for the short February and the long August.

³The British representative was Lt.-Col. Sir John Baldwin, whose diplomatic career began in the consular service in 1902. He retired from the foreign office in 1932.

with it.' And again they say: 'But the British Government would be the slowest of all to accept this reform.'

"I hope that the reply which will be given this afternoon will not say that nothing will be done because there is no demand, that there is no weight of public opinion on the subject in Great Britain. It surely is not to be expected that the mass of the workers in this country, the unemployed men or the artisans have strong views about such a subject as calendar reform. It is as well that they have not, because they have other things to do and think about. But if it were really explained to the worker and to his wife that there would accrue to them very great advantages from this reform, his point of view and his answer to a query might be very different.⁴ If, for example, it were explained to his wife that it would no longer be necessary, as it sometimes is now, to purchase a five weeks' supply of food with four weeks' pay, then she might have strong views about this subject. I hope also it will not be said by the noble Earl who will reply that nothing can be done because there are other more important things to be considered. I agree that there are, but the fact is that in those things it is very often the case that the solution of difficulties is not so easy and not so inexpensive as the solution of this one. Here is a problem which has a solution ready to be adopted, a solution which costs nothing.

PLANS FOR A NEW CALENDAR

"We suffer very much from apathy in this matter. Most of us tolerate the inconveniences of our present calendar because we do not know anything better. I dare say that the great majority of the people of this country are quite unaware that there is an alternative to the present calendar. It does not occur to them that whilst the length of our year and the length of our day are fixed for us and cannot be altered, the length of our month is a thing which we ourselves have fixed, and fixed just about as badly as we possibly could. For instance, if it was suggested to them that it would be inconvenient if our yard measure sometimes consisted of 34 inches, sometimes 36 inches and sometimes 37 inches, they would probably agree that such a situation ought not to be continued. It is now suggested that this unequal length of months is also a system which ought to be stopped and can be easily and inexpensively altered.

"There are a great many schemes for the reform of the calendar. There have been at various times anything from 180 to 300 such schemes, and the League of Nations has done most valuable work at its meetings in 1926 in reducing this large number of schemes down to two. Therefore there remain to be considered just two schemes of calendar reform.

"Both of these, in my submission, are infinitely better than the calendar

⁴A further argument that appeals to the worker is the addition of Year-End Day and Leap-Year Day as additional holidays—each as part of a week-end.

now in force; either would be a great improvement. Both contain this common principle, the principle of the blank day, which is a day that is not a day of the week nor a day of the month, but a day of the year, and by that means the calendar is fixed, and every day in the year is fixed for all time. Wednesday, March 4, would always be Wednesday, March 4. That principle has been accepted in both these schemes and, I think I may say, by the great majority of the nations who attended the League Conference at Geneva. There is some opposition to the idea. There is opposition from members of the Jewish faith and from the Seventh Day Adventists, but the weight of support which it has received renders it a scheme which ought to be thrashed out by the League of Nations.

"The advantages of fixing the calendar are in some cases apparent. Others are not at once so apparent to the casual observer, but I would ask your Lordships to consider for a moment how much easier our own daily plans would be if the calendar was fixed, if the clashing of dates by the wandering of the days of the months through the weeks was avoided. We should no more have difficulty such as the fixing of Easter on the day after the second Saturday in April, because the second Sunday in April would be, which it is not now, always the day following the second Saturday. There is reason to believe that, if the whole calendar was fixed, the one remaining obstacle to the fixing of Easter would be removed. I have reason for saying that the Roman Catholic Church would remove its objection to the fixing of Easter if the whole problem were settled and solved. The advantages to the mass of the people of this country would be very great. For example, if Christmas were always on a Monday it would be of immense advantage to shopkeepers and to hundreds of millions of people in business if they could have their Christmas holiday coinciding with the week-end.

"Many disadvantages would disappear. Business men would appreciate it if there were no longer any chance of fifty-three pay days occurring in the year instead of fifty-two or fifty-three Mondays upon which insurance stamps had to be affixed instead of fifty-two. There would be social advantages in the fixing of events. There would be even advantages in the fixing of the sittings of your Lordships' House. Finally the great stumbling block of the unequal month and the unequal quarter would be removed. I do not know whether it is generally realized that at present the second half of our year is two days longer than the first. I do not know whether it is generally realized that our quarters are of unequal length and the inconvenience which attaches to that fact. These disadvantages would be removed by the reform of the calendar.

"I mentioned that there were two systems now proposed. One has 13 months and the other has 12 months. Both are better than the present system, and I suggest that the solution of the difficulty as to which should

be adopted depends upon whether in general opinion the month or the quarter is the unit of time most valuable for accounting and costing purposes. If the month is more valuable, then we shall have the 13 months calendar: if the quarter is more valuable, then we shall have the 12 months calendar. Personally I say without hesitation that the 13 months calendar is the better of the two but, like many other people, I would be willing to support either of these two systems.

"What is it that His Majesty's Government are desired to do in this matter? It is desired that they will send a representative to Geneva armed with the opinion of organizations in this country as to whether the calendar should be reformed or not and, if so, as to which system this country desires; and, in order to arrive at some solution of the problem, the representative should be further instructed that if the majority of the nations of the world favor one scheme we shall be willing to adopt that scheme, the scheme of the majority. In other words, it is desired that the Government should take an active part in this Transit Section conference and really give a lead to the nations in bringing about this great reform.

"Just 20 years ago your Lordships were asked to approve of the principle of daylight saving. I wonder how true it is, as is so often said that it needed the Great War to get through that reform which we now treat as commonplace and which the great majority of the people of this country now think is a very great advantage to the whole world. If it had not been for the War I wonder whether we should not still be putting forward objections and all sorts of arguments against Summer Time? How long will it be before we can get for the whole world the desirable reform of a fixed calendar?

"I claim for it with all modesty nothing less than this, that if the calendar was reformed it would be of some advantage, direct or indirect, to every man, woman and child in the civilized world, and I ask His Majesty's Government, by their interest and action in this matter, to render this reform possible in 1939, so that the manifest inconvenience which all of us now suffer shall be removed."

Lord Desborough was the next speaker.⁵ He said:

LORD DESBOROUGH'S SPEECH

"My Lords, I hope that on this occasion I may be excused for saying a few words upon a matter to which I have devoted some considerable attention for many years past.

"Calendar reform is more and more occupying the attention of the world year by year, and many societies are ardently advocating it. I think

⁵ Baron Desborough—William Henry Grenfell—is a Knight of the Garter and holds the Grand Cross of the Victorian Order. His mother was a Lascelles and so related to the Earl of Harewood who married the Princess Royal, only daughter of King George V. He was educated at Harrow and Balliol College, Oxford, rowed in the Oxford Boat against Cambridge, and has twice swum across Niagara. He is a sportsman of many parts and a cousin of Sir Wilfred Grenfell, social missionary to fishermen in Labrador.

we ought to be grateful to the League of Nations for the wonderful manner in which they have cleared the air in regard to the opinions of Christian nations on this matter. As my noble friend has just said, no fewer than 300 different schemes of calendar reform were placed before the League of Nations, now reduced to the more manageable number of two.

"My noble friend has said something about the two schemes. One is that the year should be divided into 13 months of an equal number of days, and the other, which I must say I personally look upon with greater favor, is that the present system of 12 months should be continued, but that the quarters and the half-years should be made equal. The first quarter would be ninety-one days, the second quarter ninety-one days, the third quarter ninety-one days, and the fourth quarter ninety-one days. The year would then be divided into equal quarters and equal half-years. The year would always begin on a Sunday and the dates would always be the same all through the year.

"The difficulty in dealing with calendar reform is this, that unfortunately the earth takes $365\frac{1}{4}$ days to go round the sun. If it could only complete its circuit in 364 days calendar reform would be a very simple thing, and we should have a stabilized calendar. My noble friend has stated what both these systems propose to do with regard to the extra day. It would come at the end of the year and it would probably be observed as a holiday. It would not be counted into the week or month but would just be a day.

"The 13 months year is nothing new. It was advocated more than 100 years ago by Auguste Comte, the French philosopher, but after that it rather dropped out of view. The objection to it is that it is associated with other objections that are naturally taken to the figure 13. Thirteen is not cleanly divisible into halves and quarters. There would be an extra month called Sol, which would not be received with any very great enthusiasm, either generally or by people who have birthdays about that time and who would find it rather inconvenient to have a birthday on a certain date in the month Sol. Moreover, I think that historical dates would also be rather upset if we suddenly introduced a new 13th month. Both schemes involve the elimination of the extra day and, as my noble friend said, if you adopt either scheme you have a perpetual calendar.

"There is not time on this occasion to go into a lengthy discussion on calendar reform, but there is one matter that is indissolubly bound up in it on which I have addressed your Lordships on more than one occasion. That is the question of a stabilized day for Easter, which now, it is conceded by high authorities, is wrapped up in the question of calendar reform. I do not know whether your Lordships remember that in 1928 I had the honor of proposing a Bill in this House which passed through both Houses of Parliament and is now an Act of Parliament. This Act

states that Easter Day shall in the calendar year next but one after the commencement of the Act, be the first Sunday after the second Saturday in April, and for the words 'is always the first Sunday after the full moon which happens upon or next after the full moon which happens upon or next after the 21st day of March, and if the full moon happens upon a Sunday, Easter Day is the Sunday after'—which is the way Easter Sunday is fixed now according to the tables of Clavius under Pope Gregory—there shall be substituted the words 'is always the first Sunday after the second Saturday in April.' That is a simpler designation and more convenient.

"I should like to say one word about the moon which is adopted in the Gregorian system. As Professor de Morgan points out, it is not the moon of the heavens but a fictitious imitation put wrong on purpose, partly to keep Easter out of the way of the Jews' Passover, and partly for the convenience of calculations. We have at the present time—and I think this is even more important as regards the dislocation of business—an Easter which can be moved 35 days. I see that in 1940 it will be almost as early as it can be—namely, the 24th of March, and in 1943 it will be on the very latest day, which is the 25th of April. This is a great oscillation, and has a very serious effect not only on industry, but on the civil life of the people. The law terms, the University terms and the terms of all the schools⁶ in this country, and the great holidays of the people, Easter and Whitsuntide, now oscillate backwards and forwards in accordance with calculations which were made to Pope Gregory as long ago as 1582. This fact always impresses itself on my mind, namely, that if you fix the date of the birth of our Lord on December 25, it has this extraordinary effect that it tends to wander about under our present system with great inconvenience to the whole of the civilized world. This rule and the 35 days variation of Easter are now made contingent on the reform of the calendar.

VATICAN VIEWPOINT

"With the indulgence of the House I should like to explain that last year a very important delegation went to Rome on behalf of The World Calendar Association of the United States. It was instituted by the Rational Calendar Association of this country. This mission was supported by letters of delegation from the U. S. World Calendar Association, the Latin American Committees on Calendar Reform, the Bureau d'Etudes of Paris, and the Gesellschaft of Calendar Reform of Berlin.

"The important thing is that it was headed by a very celebrated Roman Catholic ecclesiastic, the Right Reverend Fernand Cabrol, Abbot of St. Michael's, Farnborough. He is one of the greatest authorities in the Roman Catholic Church, has written no fewer than 12 books on the subject and is one of the editors of the *Roman Catholic Encyclopedia*.

⁶ In Great Britain, there are three legal and academic terms in the year—this, in contrast with two semesters in the United States.

"The important thing is that a Roman Catholic ecclesiastic of his eminence should come forward to support these two proposals—namely, the reform of the calendar and a fixed date for Easter. He submitted in Latin a Memorandum representing the views of all these various associations, which is now placed on record in the archives of the Vatican. As it comes from such a distinguished Roman Catholic authority perhaps your Lordships will forgive me if I read a few extracts from this Memorandum. The Memorandum begins:

On the reform of the calendar. Throughout all Christian nations today is spread a strong desire for a reform of the Gregorian Calendar. . . . Among the members of the societies advocating this reform are many serious students of religion who feel that the stabilization of Easter would remove from the Christian Ordo an anomaly which has no basis in true doctrine and was only incorporated in the practice of the Church for reasons which are no longer valid. . . . So great is the desire of the people of Great Britain for this reform that in 1928 the British Parliament passed an Act to introduce it. That this Act has never come into force is due solely to the fact that the Roman Catholic Church has not given its assent to the reform. . . .

The proposal to set aside one day out of the days of the week [this is in reference to the proposed calendar reform] is similarly intended for the general benefit of mankind and the promotion of Christian unity.⁷ Its purpose is to enable the remaining 364 days of the year to be divided into 52 whole weeks, so that every year should begin on a Sunday and all the dates of the months fall always on the same days of the week. By this means a perpetual calendar would be established for all time.

This proposal is not necessarily of prime concern to the Church; it need only affect lay interests. But it would obviously be more acceptable to public opinion if it were accorded the sanction of the Church's authority. No Christian Community that has studied the question has found any objection to the proposal (with the exception of the Seventh-Day Adventists), and the Episcopal Church of America has expressed its official approval of it in the strongest terms.

Both these measures of reform can most easily be introduced in 1939 when the year will begin on a Sunday. Next year delegates to the League of Nations are to be called upon for a decision. There is great need today for the Church's guidance.

"Those are the principal paragraphs in this Memorandum, and I have also a *résumé* of the conclusions of the Mission of which I will quote only two: (1) The subject of calendar reform is under constant consideration at the Vatican, and close observation is being kept on the movement throughout the World; (2) the subject of calendar reform is viewed by the Vatican as a whole, and the question of Easter stabilization cannot be detached from the question of general reform.

"There is so much agreement now among the various Churches who replied to the *questionnaire* issued by the League of Nations that there is every hope of the Christian Churches combining with a request for the stabilization of Easter. Of course what we require is one Easter for Christendom. I was at one time rather disappointed that the Act to stabilize Easter was not put into force by Order in Council, but so much progress has been made now and so much agreement has been displayed

⁷ The significant words here are "promotion of Christian unity." Christendom was divided for many centuries by differences over Easter and by the later difference between the Old Style (Julian) and the New Style (Gregorian). The World Calendar disposes of these controversial and irritating discrepancies.

among the various Churches that one has every hope of there being established one Easter for the whole of Christendom.

"Another matter to which I would like to refer is the attitude of the Greek Church. It has been said very often that the Greek Church is opposed to this reform, but really the father of this movement is Professor Eginitis, a strong Orthodox Churchman and a distinguished astronomer, who was Director of the National Observatory at Athens. He has been said to be the Sosigenes⁸ of the present movement. I think that, when we are supported by such a high ecclesiastical authority as Dom Cabrol, and by Professor Eginitis on behalf of the Orthodox Church, we may consider that there is every prospect of agreement.

"This year is important because the Committee of the League of Nations, to which this matter was committed, only meets once in four years and there will be a meeting next October.⁹ We hope that the delegates from the British Government will be commissioned not only to support the motion for a fixed date for Easter but also to explain the views of the British Government on the subject of calendar reform.

"As the Committee will not meet again for another four years it is obvious that there will be a great deal of delay unless something is done next October. If the delegates at Geneva then come to some agreement they would have to refer the matter to their respective Governments, and the Holy See would be approached. As Dom Fernand Cabrol points out, the system of calendar reform could be introduced in 1939 without any dislocation, because Sunday happens to fall on January 1 that year.

"We can only hope that some agreement may be reached before then so that this long-needed reform of the calendar and the stabilization of Easter may be introduced, to the great advantage of the world, in 1939."

SPEECH BY ARCHBISHOP OF CANTERBURY

The Lord Archbishop of Canterbury, following Lord Desborough, with the following significant address:¹⁰

"My Lords, I think we must agree that a very strong case has been made out for calendar reform by the two noble Lords who have spoken, and I am sure we all regard with great admiration the chivalrous devotion which my noble friend Lord Desborough has for many years devoted to this matter. We must not allow its intricacies to affect our sense of its

⁸ Sosigenes was the Egyptian astronomer whose advice to Julius Caesar resulted in the initiation of the Julian Calendar.

⁹ A special meeting of the Transit Committee of the League could, of course, be called.

¹⁰ Cosmo Lang, Archbishop of Canterbury and Primate of the Anglican Church with its affiliated Communion throughout the world. Educated at Oxford, he ranks, by virtue of his office, immediately after the Royal Family and Ambassadors, and before the Lord Chancellor and Prime Minister. The Archbishop attended King George V at his death and it will be his duty to officiate at the Coronation of King Edward VIII. . . . The significance of the Archbishop's address is that he has always been known as a man of conservative temperament in all matters of tradition. His approval of calendar reform is thus a departure from his usual attitude. The speech is also the first authoritative pronouncement in favor of calendar reform on behalf of the Anglican Church. It is thus of the utmost importance that the Archbishop should have used such phrases as "I have found it impossible to resist the plea for reform," "I associate myself with everything which has been said by Lord Desborough on the importance of the undertaking," and "I think it would be a real misfortune if this matter were allowed to drift beyond October this year."

importance. I approach it myself with no sort of enthusiasm. When a subject enters the region of arithmetic my mind ceases to be able to follow it. (*Laughter.*) Nor have I any great belief in the value of uniformity as such. On the contrary, much is to be said for variety.

“Constitutionally, I have a great dislike of any proposal to change long and well-established customs unless there is very strong reason. But I am bound to say that I have found it impossible to resist the plea for reform in this matter, which comes, I think it may be said, with practical unanimity from the representatives of all the great organizations of trade, industry and commerce throughout the civilized world.

“The matter has been complicated, as noble Lords have pointed out, by its immense complexities, including the vagaries of the moon, and it is something, at any rate, in the way of bringing order into this confusion that the League of Nations Committee—oddly enough described as ‘Transit and Communications’—have sufficiently cleared the issue to put two alternatives before the world: the alternatives of the equal months or the equal quarters. I express no opinion as to the merits of these two alternatives, but I associate myself with everything which has been said by the noble Lord on the importance of the undertaking of this section of the League of Nations, the Transit Section, to give a definite recommendation, after consulting with all the experts who are available, as to which of the two plans it recommends. I think it would be a real misfortune if this matter were allowed to drift on beyond October this year, when it could not be fruitfully considered again until 1940.

STABILIZATION OF EASTER

“But, my Lords, I rise merely to say a word or two about that aspect of the problem with which I am concerned: the stabilization of Easter. The noble Lord, Lord Desborough, has reminded your Lordships that in this matter we have a rather special responsibility, because there stands on the Statute Book of this country an Act, the Act of 1928, definitely fixing Easter as to be observed on the first Sunday after the second Saturday in April. It is true that part of the Act provides that it shall not come into operation except by an Order in Council, which shall not be issued unless the various religious authorities have been consulted. I think that was a very wise provision. I do not think we can contemplate with equanimity a great variety among the Christian communities of the world in the observance of Easter. Heaven knows there are already sufficient divisions, and we do not want to increase them. It therefore seems to me that it might be expedient if once again I were to remind your Lordships of the position in which the matter still stands as regards the consent of the religious authorities. I am afraid that some of your Lordships would prefer to put it ‘standstill,’ and I doubt very much whether

even the important communication made by the noble Lord, Lord Desborough, carried it very much farther.

"The position is this: As regards the Anglican Community there is no difficulty. After the passing of the Act of 1928, as was only fitting and proper, there was concurrent action on the part of the Church, and the Convocation of Canterbury in 1929, followed by the Upper House Convocation at York, resolved that in the event of general concurrence among religious communions being obtained for the objects of the Act, Easter Day should be the one specified in the Act; the first Sunday after the second Saturday in April. Again, in 1930, I had the advantage of consulting the Metropolitans and Presiding Bishops, including the Bishops from the United States of America, assembled in the Lambeth Conference, and they were unanimous in saying that they saw no difficulty in principle, but they attached the greatest importance to the previous consent of the leading religious communions in the world having been obtained. There, so far as the Anglican Church is concerned, the matter rests. There was a conference of the League of Nations in 1931 to which I was invited to send a representative; I did so, and they are in possession of the facts which I have just mentioned.

"As regards the Orthodox Church, I wish I could be as sanguine as the noble Lord who has just spoken. It is true that as long ago as 1924 the then Œcumenical Patriarch professed himself ready to pronounce in favor of calendar reform and of a fixed Easter, but since then nothing further has been done. One of the difficulties, and one which is continually recurring in other connections, is that, mainly for political reasons, the autonomous churches of which the Orthodox Church is composed find it almost impossible to assemble and come to any binding decision.¹¹ As regards the Protestant Communion, we have known some years ago that the League obtained assurances from no less than 82 various Churches and federations in favor of calendar reform and a fixed Easter.

"There remains the great Roman Catholic Communion—in this matter one of vital importance, as it is the largest and most widespread of all. I doubt very much, valuable as is the communication which the noble Lord has made, whether it carries us very much farther. I think it only shows that the Holy See is perhaps returning to the position which was taken in 1921. In that year my predecessor read a letter to your Lordships from Cardinal Bourne, some of which perhaps it is pertinent to

¹¹ This is hardly a full statement of the case. The present position is that the Eastern world has adopted the Gregorian reckoning with the exception of Bulgaria, Poland, Jugoslavia and Jerusalem where, however, the civil use of the Gregorian Calendar is customary. The Eastern Orthodox Church, through its official representatives, has indicated a desire to find a solution of these differences in The World Calendar which, of course, includes the stabilisation of Easter and would embrace the whole community. An official statement of the case was made by Professor Eginitis as the representative of the Eastern Orthodox Church of Constantinople in a report, dated June 23, 1931. . . . The difficulties indicated by the Archbishop are merely incidental to the disturbance of ecclesiastical procedure since the World War. Orthodox opinion is thoroughly united in support of The World Calendar.

read again. The Cardinal, it should be said, was not writing officially:

I have reason to think that the attitude of the Holy See is one of willingness to sanction the proposed change [that is, the stabilized Easter] provided there be a practically unanimous request to that effect from the principal Governments of the world. I do not think there is any likelihood of the Holy See taking any initiative in the matter.

Since then I think it would be true to say that the Holy See was rather less than more inclined to advance in this respect. I acknowledge the importance of the communication, which has just been read, by a very distinguished and eminent scholar and divine, but your Lordships noticed that there was no intimation of the real effect which it had upon the policy of the Vatican. I can only hope that the Vatican may be reverting to the attitude which was described in 1921 by Cardinal Bourne.¹²

"If, therefore, the request which has been made to the Government is carried out, if this country gives a strong lead to the League of Nations Transit Section to come to some decision between these two alternative schemes of calendar reform, and if in October of this year the Quadrennial Conference can register a general agreement on this matter among most of the principal communions of the world, then I hope it may be possible for the Vatican to reconsider its hitherto generally expressed attitude. If so, then I hope¹³ that my noble friend Lord Desborough may be still alive to see the fruition of his long labors!"

STATEMENT BY BRITISH GOVERNMENT

After these speeches, the Government spokesman, the Earl of Feversham, rose to reply on behalf of the Government.¹⁴ He said:

"My Lords, I am sure that your Lordships have listened with interest,

¹² The report of the Cabrol Mission (June, 1935) on the present attitude of the Vatican was as follows: (1) The subject of calendar reform is under constant consideration at the Vatican, and close observation is being kept of the movement for reform throughout the world. (2) The subject of calendar reform is viewed by the Vatican as a whole, and the question of Easter stabilization cannot be detached from the question of general reform. (3) Before any action by the Holy See can be contemplated, it is in the highest degree desirable that unity should be established between the advocates of differing methods of reform, or, failing unity, the expression of an overwhelming opinion in favor of one system. (4) Such agreement upon a definite method of revision should have formal approval from the leading governments which, through the League of Nations, have already pressed for reform. If such an agreement is reached, and the Nations were to present the Holy See with a request that the Holy Father should examine the question, it is probable that the request would be welcomed. But until such agreement has been reached on a definite plan, it would be unwise for the League or governments to again approach the Holy See for an official decision. (5) It is desirable to make clear that the demand for calendar reform is not prompted by any sectional interests, but is universal. (6) The Mission satisfied itself that opinion in the Vatican is in favor of a 12-month system, and is averse to a 13-month year.

¹³ This concluding sentence of the address again emphasizes the decisive attitude taken by the Archbishop on behalf of the Anglican Church in reference to the immediate adoption of calendar reform. It will be realized by all readers that the Archbishop is speaking *officially* from his seat in the House of Lords.

¹⁴ Earl of Feversham—Charles William Slingsby Duncombe—Lord-in-Waiting to the King. . . . A fair interpretation of his reply is that the Government favors The World Calendar—not only in principle, but as a definite and detailed proposal. With The World Calendar on the table, the Government indicates a readiness to welcome development in the direction of reform, along these specific lines. This is the first time that a British Government has ever granted such an endorsement of any general proposal to reform the calendar. Lord Feversham's statement indicates definitely what (according to present intentions) will be the instructions issued to the British delegation at the next League of Nations meeting dealing with this subject. The significant phrase in his address is the concluding one—that if the matter is placed upon the Agenda at Geneva [it already has a place on this Agenda], the whole question will have the most *sympathetic* and serious consideration of His Majesty's Government.

if not with sympathy, to the argument so precisely put forward by the noble Lord who moved this Motion, Lord Merthyr, and so loyally supported by Lord Desborough. In view of those arguments perhaps it would be of service to your Lordships' House if I were briefly to enumerate the initiative and activities of this country in the consideration of the question of the reform of the Gregorian Calendar. Reference has been made to the Advisory Committee for Communications and Transit of the League, which in 1923 appointed a special Committee to consider the reform of the calendar. This Committee reported in 1926, and dealt separately with the reform of the calendar and the stabilization of Easter. They considered, as Lord Merthyr had informed us, no fewer than 185 various schemes for the reform of the calendar, and in their Report they referred to three schemes, two of which had been given attention both by Lord Merthyr and by Lord Desborough.

"I think it would be unnecessary for me to go into the merits or otherwise of these specific schemes, except merely to refer to the circumstance that in both schemes in ordinary years, as has been pointed out, there would be a blank day, but in this year of 1936 there would be two blank days, owing to the fact that it is leap year. I do not wish to state an opinion to this House as to whether that would lead to confusion or not in the minds of many British citizens, but the fact remains that confusion would no doubt arise, especially when leap year arrives. A point, however, that I think is of extreme importance, is that although the Committee considered these schemes they did not decide in favor of any particular scheme. They reported that although powerful propaganda movements were on foot, public opinion was not yet prepared, even if it welcomed reform, to press for immediate action in any particular direction. When the Report was considered by the Assembly of the League, the Assembly suggested that the examination of the question of calendar reform should be coordinated and organized in each country by national committees of inquiry on official or semi-official lines. Therefore in September, 1930, an official British Committee of Inquiry was constituted, to ascertain 'whether and in what form public opinion holds calendar reform to be desirable or possible.' This Committee was presided over by the late Lord Burnham, and reported in May, 1931.¹⁵

"Of the activities of that Committee it is worth mentioning to your Lordships that it circularized 499 industrial and commercial bodies, but received replies from only 64. Of these, 29 expressed 'no opinion' in various terms, and only 23 out of the 499 expressed themselves as favorable to reform. It had further circularized 62 professional organizations, of which only 25 replied. Sixteen stated that they had no interest, five

¹⁵ Lord Burnham was the proprietor of the well-known newspaper—*The Daily Telegraph* of London.

were opposed to change, two were in favor of change, and two were in favor of a fixed Easter. I think it was particularly significant that the chartered accountants had no opinion to offer at all, and that the Committee of the British Bankers Association concluded that no sufficient reason had been advanced for a change. Further, the Committee consulted the Association of British Chambers of Commerce, the executive council of which declared themselves as not in favor of calendar reform. The National Council of Women of Great Britain was also opposed to change. Therefore your Lordships will observe that from the Committee's Report it was clear that, in their words, the prospect of the acceptance of a 13-month calendar by British public opinion is, for at least a good many years to come, very slight, and that there is no widespread discontent with the existing system.¹⁶

13-MONTH CALENDAR DISAPPROVED

"This matter was further considered by an unofficial Parliamentary Committee, whose principal conclusion was that a 13-month calendar was, in their words, definitely repugnant to British feeling.

"The noble Lord, Lord Merthyr, has referred at some length to the general question of calendar reform as it was considered by the Fourth General Conference on Communications and Transit, held in 1931. The Conference then adopted a Resolution concerning the economic and social aspects of the simplification of the Gregorian Calendar, which stated:

The Conference was almost unanimous in coming to the conclusion that the present is not a favorable time . . . for proceeding with a modification of the Gregorian Calendar. The Conference . . . did not think fit to express any opinion on the principle of calendar reform.

I was rather surprised, having known of that Resolution passed by that Conference, that the noble Lord should have devoted so much time during his remarks to the proceedings which took place within that Conference.

"So far as His Majesty's Government are aware there is no very substantial demand in this country for a radical reform of the calendar. In fact the Government have been aware of considerable opposition to the proposal. Although the Trades Union Congress passed, in 1928, a resolution to the effect that the time is now ripe for calendar reform, the Federation of British Industries has informed my right honorable friend the Home Secretary of its opposition to the general reform of the calendar. I think it would be useless for me to say much concerning the position of the Churches, especially as regards the Anglican Church, as the House has had the advantage of hearing the views of the most reverend Primate. But the Report of the Unofficial Committee said that the Anglican Church would only agree to a change if it did not cause a difference of practice among Christians; while the Roman Catholic Church

¹⁶ This pronouncement ends any prospect of seeing an adoption of the Thirteen-Month Calendar by the British Empire.

would not sanction any change unless there was overwhelming evidence from all nations of an almost universal desire for change. That was contained in the Report of the Unofficial Committee, who were in a position to have evidence to that effect. The Jewish community, I understand, are opposed to calendar reform that interferes with the religious week.

"Your Lordships will perceive that in those circumstances, with the facts that have been brought to the notice of those who have had to inquire into the matter, it would be difficult for His Majesty's Government to agree to the proposal made by the noble Lord that His Majesty's Government should take a lead in bringing the question before the Committee for Communications and Transit.

"But I can assure your Lordships that, if the matter were to be placed upon the agenda of that Committee, the whole question of the reform of the Gregorian Calendar and the stabilization of Easter would have the most sympathetic and serious consideration of the representatives of His Majesty's Government who attended that Committee.

"I am afraid that I have not by any means satisfied the noble Lord who moved this Motion, but I am sure your Lordships will appreciate that, from the evidence that has been submitted, there is no definite demand for a change at present. In those circumstances the Government feel that they cannot go to the lengths which some of those who have taken part in the debate today would wish them to go."

CLOSING REMARKS BY LORD MERTHYR

Lord Merthyr closed the debate¹⁷ with a few additional remarks:

"My Lords, although the noble Earl has rightly perceived that he has not satisfied me in the reply which he has given us, I should like to take this opportunity of thanking him for the trouble he has taken in the matter. He spoke of the confusion which it is alleged would be caused by the second blank day in leap years, but it comes as a surprise to me to learn that the British public would in any way object to the extra holiday which that would involve, because those blank days would of course be national holidays. He also said that he was surprised that I dealt at such length with the last meeting of the Communications and Transit Section. The point I wanted to make was that it was hardly surprising that such a negative result should have been arrived at after the very indecisive, and indeed nebulous, contribution made by the British Government. I feel, as many others do, that if the British Government were to give a lead and set an example the result would be very different."

¹⁷ The debate ended in the manner usual after such discussions. The "motion for papers" was by leave withdrawn. This does not mean that calendar reform suffered a set-back, but merely that the debate had served its purpose. The position now is that the British government—"most sympathetic" to the "whole question" of The World Calendar and Fixed Easter—will give "serious consideration" to whatever possibilities arise.

EASTER AND THE CALENDAR

By THE RIGHT HON. LORD DESBOROUGH, K.G.

(*From The Spectator, March 20, 1936*)

INCONVENIENCES of a shifting Easter are becoming more realised every year. In 1940 Easter Sunday will be on March 24th, within two days of the earliest possible date, and in 1943 it will be on April 25th, which is the latest possible date. This will affect the Law Terms, the University Terms, the School Terms throughout the country, and the great holidays of the people of Easter and Whitsuntide. It will also affect Banking, Finance, Trade, Commerce and Industry, as well as Railway and Shipping concerns.

An oscillating Easter, again, vitiates comparative statistics owing to the irregularities in the occurrence of the Easter Holidays. Our financial year dates from April 6th to April 5th, and in twenty consecutive financial years there were six which had one Easter Holiday, seven which had two Easter Holidays, and seven which had no Easter Holiday at all.

Easter Sunday is fixed in accordance with the wonderful tables drawn up by Clavius for Pope Gregory XIII, when he reformed the Julian Calendar in 1582, the principal object of which was to eliminate the error of ten days which had accrued owing to the Julian year of $365\frac{1}{4}$ days being too long by eleven minutes twelve seconds. Easter was unfortunately not stabilised at the same time, but was made dependent on the "ecclesiastical" moon, a device used by Clavius in drawing up his tables. Christmas Day, which celebrates the birth of Our Lord, is fixed in the Solar Calendar, while Easter, which commemorates the Death and Resurrection, wanders about over a space of thirty-five days.

Congresses of Chambers of Commerce, International, Imperial and National, and important bodies representing Education, Law, Trade, Industry and Commerce have for many years voted resolutions in favour of a fixed date for Easter, and a Bill was passed through both Houses of Parliament which became the Easter Act of 1928. This Act provides that Easter should be the first Sunday after the second Saturday in April, and these words are used instead of the second Sunday to prevent Passion Sunday falling on Lady Day, as sometimes happens now.

This Act can be put in force by an Order in Council, but there is a wise proviso that before the draft order is made "regard should be had to any opinion officially expressed by any Church or other Christian body." The opinions of the leading Churches and Christian bodies have in fact been ascertained, and there has been found to be an overwhelming desire for the establishment of a stabilised Easter by common consent. The Church of Rome, however, though it has pronounced that no question of dogma

is involved, has intimated that sufficient cause must be proved before the practice of centuries is altered with its approval.

The reform has nevertheless been advocated by many eminent Roman Catholics. Many years ago the Roman Catholic Bishop of Salford wrote these words with regard to the stabilisation of Easter: "The dogmatic dangers and difficulties of the early centuries involved in the change of the Paschal calculation are no longer existent, and there can surely now be no objection from the theological point of view."

In June, 1935, another high authority of the Roman Church, the Right Reverend Fernand Cabrol, Abbot of St. Michael's Abbey, Farnborough, headed a mission to Rome to ascertain the attitude of the Vatican toward the proposals for a fixed Easter and Calendar Reform. The mission was organized by the Rational Calendar Association of London and supported by leaders of delegations from a number of similar organizations in Europe and America.

A more fitting head for such a mission than Dom Fernand Cabrol could hardly be found, as he has written more than twelve books in French on the liturgy and ecclesiastical history, and many books in English on the Mass, Liturgical Prayer and kindred subjects, besides being an Editor of the great *Dictionnaire d'Archéologie Chrétienne*. This learned ecclesiastic presented a memorial in Latin in favour of a fixed Easter and a reformed twelve months Calendar of equal quarters, which was placed on record in the official archives of the Church.

As a result of numerous conferences which were held in Rome, the Mission came to these conclusions, among others, namely, that (1) the subject of Calendar Reform is under constant consideration at the Vatican, and close observation is being kept of the movement for the reform throughout the world, (2) the subject of Calendar Reform is viewed by the Vatican as a whole, and the question of Easter stabilisation cannot be detached from the question of general reform, and (3) the Vatican would be very unlikely to look with favour on a thirteen-month year. It would thus appear that the two great questions of the Fixing of Easter and the Reform of the Gregorian Calendar should be taken together, and such a policy would have great advantages.

The League of Nations has taken up the consideration of Calendar Reform, and great progress has been made through commissions set up in different countries. A very large number of schemes have been examined, and two have survived the ordeal, namely, a 13-month year of 28 days, and a 12-month year with equalised quarters. Both of these systems would produce a permanent perpetual Calendar.

The 13-month year would provide equal months of 28 days each, but necessitates the introduction of a new month to be called Sol, a proposal which, as was made clear by the Government spokesman in the recent House of Lords debate, has not been received with much enthusiasm in this country. The "Equal-Quarter" Calendar would have 91 days in each quarter, the year would always begin on Sunday, January 1, and end on Saturday, December 30. The first month of each quarter, January, April, July and October, would have 31 days, and the other months 30.

The present year is of the greatest importance in the history of this movement. The relevant Committee of the League of Nations meets next October, and as at present constituted does not meet again for four years. In 1939 the year begins on Sunday, January 1, and this does not happen again till 1950. If the League of Nations approved of the proposal to fix Easter and reform the Calendar, the various Governments could be approached and the result laid before the Holy See. It is to be hoped that the Government will instruct its representative on the Committee to support a moderate Reform of the Calendar, which would include a fixed date for Easter, and the new Calendar might then be put into operation in 1939.

DESBOROUGH'S LEADERSHIP

By ELISABETH ACHELIS

President, The World Calendar Association

ON MARCH 4, 1936, the British government formally announced its advocacy of calendar reform. The announcement was made quietly with the restraint of official language, from the floor of the House of Lords. It stated that the British delegates at Geneva would give "most sympathetic" consideration to the question of calendar revision which is scheduled for submission to a League of Nations commission this fall.

The government commitment was so worded that its full significance was lost to many of the listeners, as it may even be lost at first reading to many of those who only give a cursory glance at the official text.

But its significance was not lost to Lord Desborough, the persevering leader whose steady devotion to the cause of calendar reform has at last won for him the prospect of victory which he so richly deserves. He correctly viewed the announcement as his government's official declaration of policy in favor of a revised calendar.

Lord Desborough's interest in calendar reform dates back prior to the World War, when he became interested in the beginnings of the movement on the Continent. He followed its early development in Switzerland and Germany. Then, after the war, he saw it reappear, and he sought to enlist British support in Parliament as early as 1920 and 1921. Finding that British interest was more stirred by the possibility of a fixed Easter than by the more comprehensive suggestion of general calendar revision, he decided to campaign, for the time being, on Easter stabilization as a first stage in the larger reform. He slowly won the hesitating support of British leaders in church and state. At parliamentary hearings in 1920 and 1921, he saw the Archbishop of Canterbury give a qualified approval of his plans regarding Easter. Eventually in 1928, after nearly a decade of adroit and energetic campaigning, he brought the Easter project triumphantly to the floor of Parliament and obtained for it the full approval of both legislative houses. Great Britain's Easter Act was, in fact, the first actual legislation by any country on the subject of reforming the Gregorian calendar.

Eight years passed, however, before Great Britain was ready for the next step, which resulted in the commitment given by Lord Feversham, as government spokesman, in the recent House of Lords debate.

The progress which was made with the British people during the intervening years is indicated by the complete support given to Lord

Desborough on this later occasion by the Archbishop of Canterbury. No qualifications accompanied the Primate's official utterance, which, aside from its hearty endorsement of his colleague's viewpoint, was mainly a considered and thoughtful appeal to the other great churches of Christendom to join in the enactment of a new calendar before 1939.

Lord Desborough, at 81, is a British peer who has many ties of friendship and understanding throughout the world. His pre-eminence as a sportsman and as a business leader, aside from his family connection with the Morgan-Grenfell banking house, have helped to make him known in America. As a young man, he climbed the Rockies, swam twice across the Niagara River, and endeared himself to Americans by his prowess and daring. Turning to business, he proved himself the kind of an "organizer" that Americans understand and admire. For the greater part of his business life he was easily the outstanding personage in the Chamber of Commerce movement in England and a familiar figure at international business conventions. Active in politics, he entered public service as William Henry Grenfell, member of the House of Commons, rising later to a peerage and engaging actively in duties on many government committees and public bodies.

Fortunately for the cause of calendar reform, Lord Desborough has never thought of "retiring," even after four-score years. The picture shown as the frontispiece of this Journal is a recent one, given to the writer on the occasion of a conference on calendar reform at his Lordship's summer home near Norfolk.

For more than twenty years, he has zealously watched and studied the currents of thought and action that are leading the world today toward an improved calendar. He early realized that the process was a gradual one, that there were obstacles of tradition and usage to be patiently met, without violence or irritation, and that the situation called for persistent and prolonged educational efforts.

He watched the movement for a new calendar grow up in the Eastern Orthodox Church, and was encouraged by the leadership of Prof. Eginitis of Greece, who came to be the official representative of the Ecumenical Patriarchate at all important conventions and conferences dealing with this subject. No less hopefully did he observe the growing sentiment in the Roman church for an improvement in the Gregorian system which was foreseen and hoped for by Pope Gregory 354 years ago.

The part that the churches must necessarily play in any effective international agreement on the calendar was clear to him. He did not unduly urge his own church to action, for he knew that a "level" front was more important than the spectacular advance of an individual unit.

Meanwhile he pursued his activities on the civil side—in governmental, commercial and scientific bodies. There were other earnest leaders, too;

and Lord Desborough was the last man to claim sole prerogative of leadership when there were others who were competent, able and willing to guide and direct the movement.

In the early 1920s, the various international activities for calendar reform focussed themselves on the League of Nations. The currents which converged at Geneva included the Swiss government, long an active proponent of calendar reform, the International Astronomical Union, which had early taken the scientific leadership of the cause, and the International Chamber of Commerce, representing business and commercial relationships. Out of these (in none of which Lord Desborough had been entirely absent) grew the organization of a special League committee of inquiry in 1923. On this committee were representatives of the three leading religious groups, seeking to clear the ground completely of dogmatic difficulties. Rome, Constantinople and the Protestant group (represented by the Anglican delegate) agreed in a definite and binding commitment that "no dogmatic obstacle stood in the way of calendar revision." This may have seemed a negative progress to many over-ardent advocates of reform; but to Lord Desborough it was signal progress.

By 1931, the nations were ready for their first formal international convention on the subject. Delegates of 44 nations participated in the lengthy deliberations, which again resulted in a kind of progress which seemed negative to many, but which a more discerning eye could see was another necessary step in clearing the ground for definite action.

That this action will come in October of this year is the hope and belief which was confidently expressed in the House of Lords debate by both Lord Desborough and his strong supporter, the Primate of the Anglican Church. Whether at the postponed quadrennial session of the Commission on Communications and Transit, or at a special meeting called for this express purpose, there can be little reason to doubt that calendar reform will come up for international consideration. And the formal statement of the British government, made through Lord Feversham in answer to the motion of Lord Merthyr, assures the world that Great Britain will stand four-square in a "most sympathetic" and serious support of the new calendar which is advocated by Lord Desborough and a host of far-sighted men and women the world over.

Lord Desborough supplemented his address in a letter published prominently in the London Times on March 14, in which he says:

"TO THE EDITOR OF THE TIMES

"Sir,—In the debate on the Calendar in the House of Lords on March 4, I rejoiced to hear so powerful a voice as that of the Archbishop of Canterbury lifted in support of the plea that the Government should give a definite recommendation to the League of Nations Committee which is to reconsider the question of calendar reform this autumn.

"The case for reform has long been prejudiced by the fact that, of the two schemes

selected by the League Committee for final consideration, the plan for dividing the year into 13 months (including a new month called 'Sol' to be inserted between June and July) has till lately received the greater publicity. Most people, however, will agree with Lord Feversham, who, in replying for the Government, quoted from the report of the unofficial Committee on Calendar Reform (1931) the conclusion that a 13-month calendar was 'definitely repugnant to British feeling.'

"The alternative scheme, which, by a slight rearrangement of the days of our present calendar and by treating one day in the year as a day apart, would establish a perpetual year of four equal quarters, is favored by a substantial body of responsible opinion not only in this country and the United States but in many other Christian countries throughout the world.

"It would appear that the active opposition to reform which was mentioned in the reply of the Government was really opposition to the 13-month scheme, and that the allegations of public apathy on the question, although true of 1931, when the Burnham Committee of Inquiry reported, are much less true to-day. Such a subject as this cannot, of course, be expected to excite the passionate interest of the general public, but it is a fact that many responsible bodies, beginning with the International Chamber of Commerce, which has repeatedly pressed for action, and including in this country many leading chambers of commerce, the National Chamber of Trade, and the Trades Union Congress, have passed resolutions in favour of a moderate scheme of reform. It is within my knowledge that many of these resolutions have been forwarded to the Home Office, though they appear not to have been brought to the notice of Lord Feversham before the debate.

"It is satisfactory that the Government has promised that the question will have the most sympathetic and serious consideration of their representatives at Geneva when the relevant committee considers the matter this autumn. The universal desire in this country for a stabilized Easter has been expressed by the passing through both Houses of the Easter Act of 1928, but pending the general assent of all the Christian communions, which is plainly an essential preliminary, that Act has never been put into operation by the Order in Council required. The movement for a general reform of the calendar has recently developed so widely that the two aspects of reform have now become inseparable. In a fixed calendar, of course, the date of Easter would be stabilized not only on a particular Sunday but also on a particular date in the year.

"Clearly the Government's attitude must be determined in the main by the weight of public opinion behind the movement for reform, and I may perhaps be allowed to express the hope that interested organizations will take the opportunity to acquaint themselves with the questions at issue. These are not by any means so complicated as they have been made to appear, but it is obviously not possible to expound the case for reform and to present the scheme for a fixed calendar within the limits of a letter. There has been published a small booklet explaining the very simple measures proposed, and I should be happy to see that a copy is sent to anyone who applies to me for it.

I am, &c.,

DESBOROUGH.

Taplow Court, Taplow, Bucks."

BALTIC REPUBLICS WANT ACTION ON CALENDAR

ANNOUNCEMENT was made from Geneva on March 18 that the Government of Estonia has declared itself officially in favor of calendar revision, advocating the 12-month equal-quarter reform and the stabilization of the Easter date. It notified the church authorities in Estonia of its action, and asked their approval and endorsement, which has been given. It is expected that the governments of the other Baltic republics will take similar action immediately, as a result of the close collaboration which has been established between them during the past few years.

PASSING OF THE PATRIARCH

By CHARLES D. MORRIS

NOTABLE impetus has been given to the cause of calendar reform during the past decade by the leadership and support of the Eastern Orthodox Church, and the death of His Holiness Photios II, the Ecumenical Patriarch, will be mourned as a distinct loss to the cause of revision.

The Patriarch, Photios Maniatis, was elected to his high office in 1929, and the subject of calendar reform came to his personal attention almost immediately. He approved the appointment of Professor Demetrius Eginitis of Athens as his official delegate and spokesman at various international conferences where the church desired to be represented. These culminated in the meeting called by the League of Nations in 1931, regarding which Professor Eginitis submitted a formal report, later published in *Ortodoxia*, official organ of the Ecumenical Patriarchate. This has since come to be regarded as the expression of the considered attitude of the Orthodox Church. The essence of the report is as follows:

"I, myself, as the representative of the Church at Constantinople, supported the 12-month equal-quarter plan and the stabilization of Easter in the committee of the League of Nations. The opinion of the various churches is that it can be successful, because it involves no question of dogma or canonical principle."

The Patriarch was a man of wide learning and unquestioned scholarship. The researches which were made into the whole question of calendar reform were regarded by him as of high importance, particularly in view of his paramount interest in church unity, both within his own faith and among the other great churches of Christendom.

This interest was evidenced in correspondence with secular calendar reform organizations in New York, Geneva and elsewhere, as well as with the officials who dealt with the subject in the League of Nations, in the international church organizations, and among the autocephalic churches of Orthodox countries.

The Patriarch also received in audience leaders of the calendar reform movement who visited his palace in Istanbul for this purpose. Two years ago the Patriarchate received an American delegation which included the President of The World Calendar Association.

His Holiness Photios II had great personal dignity; the first Patriarch in more than 1000 years to bear the name Photios. He died in his 62d year, on Sunday, December 29, 1935, after a long illness.

The Patriarch's domain is Phanar, Golden Horn suburb of Istanbul, and by government requirement he must be a Turkish citizen. However, only

five sees in Turkey have remained subject to him, along with four in the Italian Dodecanese, one in Prague for Czecho-Slovakia, one in Sydney for Australia, one in New York for North and South America, and others in Finland and Estonia. Shortly before his death he gave the church of Latvia its autonomy. The larger units of the church, including those in Egypt and Palestine, Yugo-Slavia, Roumania and Greece, were already autonomous.

Owing to this autonomy, it has been necessary in considering the general attitude of the Eastern Orthodox Church on calendar reform, to remember that the Patriarch had no power to legislate in such a matter, but merely to act as the head or president of the various autocephalous churches. An actually binding decision, either in regard to Easter stabilization or in regard to general calendar reform, requires action either by an Ecumenical Synod or by a Pro-Synod.

However, the leadership of the Patriarchate has been clear and emphatic, and the attitude of the autocephalous churches has been fairly well defined during the period that has followed the Eginitis statement of 1931. It is agreed that no question of dogma is involved, and there has been no opposition to Easter stabilization, provided that it is based on a general agreement of Christian churches. There has been no adverse criticism of Professor Eginitis' report in support of general calendar reform of the 12-month equal-quarter type.

The Patriarchate's position on calendar reform has been supported also by all the important non-Orthodox churches of Christendom. The Vatican has indicated its sympathy and interest in the movement and has officially communicated to the League of Nations its decision that there is no dogmatic objection. The Universal Christian Council, the official congress of non-Roman churches, has established a standing committee charged with the sole duty of promoting the cause of calendar reform, and the Eastern Orthodox Church has officially designated members on this committee.

Thus the churches of the world are seen uniting, perhaps for the first time in history, on the advancement of a particular cause. This fact alone, as the Patriarchate has pointed out, gives calendar reform high significance—in its bearing on church unity—to the whole of Christendom.

The approval and patronage of the Patriarchate has resulted recently in the publication of an exhaustive and scholarly monograph written by the Archbishop of Athens, dealing intensively with the whole subject of calendar reform within the Eastern Orthodox Church. An abstract of this work was printed in English, a few days before the Patriarch's death, by the Journal of Calendar Reform.

The Archbishop's researches indicate that the interest of the Orthodox Church in calendar revision came sharply to the front beginning in 1919, when a special commission was appointed by the Holy Synod. The report of

this commission urged the adoption internationally of an improved calendar "more scientifically accurate and not suffering from the defects of the two calendars now in use, Julian and Gregorian."

A year later, in 1920, the Patriarchate declared that "a definite revision of the calendar is imperative." A new commission was appointed to promote the change, and the members of that committee became, during the next decade, acknowledged world experts and leaders on this subject,—Professor Eginitis of the University of Athens, Professor Chrysostomos Papadopoulos (now Archbishop of Athens) and Professor H. Alivisatos, now the leading representative of the Orthodox Church in its relations with the western world. Coupled with this group should be mentioned also the Archbishop Germanos of London, who has taken an eminent part in presenting his church's views on the calendar to the Church of England, the Federal Council in America, and the various continental church groups.

It was through these church leaders that Photios II carried the Patriarchate's views on calendar reform to the outside world, and ably advanced it toward its ultimate goal of realization and enactment.

TIME TO CHANGE

By W. K. HERRICK

(Address at the Rotary Club of Cherokee, Iowa)

SINCE man first emerged from his savage state, there has been a series of attempts to improve the method of recording the passing of the days. The calendar has been revised several times in recorded history, and there is nothing unusual or revolutionary in changing it. Julius Caesar gave us our present calendar; Pope Gregory made some improvements on Caesar's system.

Merely because of man's inertia, we are still using a calendar which is cumbersome and inefficient. Some of its irregularities are merely survivals of the personal egotism of two Roman emperors who died nearly twenty centuries ago.

Nations have been debating for 50 years the question of making a change in our antiquated calendar. Its inequalities and variations have become a real handicap to modern business. The matter is one of immediate and practical international importance.

Among the disadvantages of the present calendar, a familiar one is the difficulty of adjusting industrial and educational schedules to the vagaries of wandering holidays. Another is the impossibility of making accurate statistical comparisons between one period and another.

The type of revision which will probably be adopted is a 12-month equal-quarter plan known as The World Calendar. Some years ago a 13-month calendar was proposed, but its inadequacy in meeting the needs of modern business aroused such violent opposition that it has been dropped by many of its former advocates.

SPEAKING OF LEAP YEAR

By PROFESSOR HARLAN T. STETSON

Harvard University

(From This Week Magazine, February 16, 1936)

FATHER TIME declared an extra dividend in February this year. Leap Year it is—and the customary opportunity for aggressive feminine aspirants to speak for themselves.

Did you know there is a possibility that this may be the last year February will have just twenty-nine days? Not that it is going to be deprived of its extra day, but rather that the month may be put on a more equitable basis with the other months of the year.

This is the plan of large groups of people who are sponsoring a revision of the calendar. It has now been officially supported by resolutions passed by five national scientific bodies, by the Chamber of Commerce of the State of New York and by the Assembly of the Protestant Episcopal Church.

The change in reckoning will be so slight when it takes place that you will hardly know the difference except at the end of the year, when you will have a grand holiday preceding New Year's Eve, called the "Year-End Day." It will be neither the last day of December nor the first of January.

The easiest kind of year to make this change will be a year when January 1 falls on Sunday. The next opportunity, therefore, will be 1939.

A conference is likely to be called by the League of Nations this year to consider the matter. If the change should be made in 1939, then never again will February be restricted to twenty-eight or twenty-nine days; it will have thirty days every year. Leap Year will bring an extra day, but it will be at the end of June.

Do you know where our present calendar came from or how terribly irregular it is? Civilization has been putting up with a confusion in time reckoning for many thousand years. If you think calendar making is easy, just try to satisfy the man who wants his day to be governed by the sun, the month by the moon and the year by the seasons! The earth turns on its axis every twenty-four hours. That makes the day. The moon goes about the earth once every twenty-nine and a half days, so you just cannot make a month out of an even number of days or weeks. Then, the earth goes around the sun in just a bit short of three hundred and sixty-five and one quarter days. Even the year cannot equal a whole number of days!

In the days of the Roman Empire, when Julius Caesar was elected Pontifex Maximus in 63 B.C., he was charged officially with straightening out the calendar, which was then so badly out that spring was not coming until the end of May. The Romans at that time were not very good scientists. They were putting too many days into the year, and it was the ac-

cumulated troubles of all this that Julius Caesar was asked to straighten.

Caesar was no astronomer, but he had week-end attractions down in Alexandria, Egypt. He learned a few things down there aside from what Cleopatra taught him, and these were some fundamental facts about the movements of the sun. He found that the best astronomical estimate of the year's length at that time was 365 and one-quarter days.

Caesar therefore decided that there should be twelve months containing alternately thirty-one and thirty days each, except for February. Ordinarily February would have twenty-nine days. This would make, then, just 365 days in the year.

Since in this scheme of reckoning the year would be short one-quarter day, in four years it would be one whole day behind. To correct this he would add an extra day to February, making it have thirty days every fourth year. In juggling the odd and even months, he gave the seventh month thirty-one days and named it after himself—"Julius." We translate this into the English "July."

Affairs of the calendar went along very satisfactorily until Augustus took the throne. He decided to change the Latin name of the eighth month, which had been Sextilis, to his own name, Augustus. And he purloined a day off February in order that Augustus (August) should have thirty-one days, the same as Julius (July).

Thus February was shorn of two days. Hence it since has been condemned to twenty-eight days except in leap year.

While the twelve-month calendar constructed under Julius Caesar was the best yet, it subsequently developed that the Julian leap year was a bit too long to even things up. By the middle of the sixteenth century spring came on March 11 instead of March 21.

Pope Gregory XIII took it upon himself to remedy matters; so in the year 1582 he decreed ten days should be dropped from the calendar—October 5 of that year was decreed to be October 15. He also declared that three leap years should be forgotten in each 400 years. That is why 1900 was not a leap year, but 2000 will be one. (To make it easy to remember when to forget leap years, one has only to recall that century years are not leap years unless the century year can be divided evenly by 400.)

This Gregorian calendar does not make things quite right, but the error is so small that it will not accumulate to as much as a day in 3,000 years.

While the Catholic countries generally adopted Pope Gregory's improvement, Protestant Europe did not agree to it until the beginning of the eighteenth century. Great Britain and North America did not make the change until 1752.

The last country to adopt the new style was Turkey, which went modern in 1927. Four years before, a committee was appointed by the League of Nations to consider the reform of our present calendar and the fixing

of Easter. The committee considered and compared 185 plans. In 1931 the League held another calendar conference.

From this international discussion the plan for a perpetual calendar of twelve months divided into equal quarters emerged as one offering the greatest promise for early adoption. This calendar would give us a year of 364 days, divided into equal quarters of ninety-one days each, and an extra day at the end of the year to be called "Year-End Day." On this equal-quarters plan every three months would be alike. The first month would have thirty-one days and the remaining two months of each quarter thirty days. The first of each quarter would start on Sunday. The fourth of July would always fall on Wednesday. School programs and academic schedules would be more constant. Corporations making financial reports would find figures for each quarter based on the same number of working days.

This equal-quarters plan is sometimes called The World Calendar. It is not likely to be adopted until all the principal nations agree upon it, but this may happen sooner, perhaps, than you think. The League of Nations stands ready to call another calendar conference whenever two or three governments request it. Mexico has already gone on record. What country will act next?

FOREIGN ADVISORY COMMITTEE

THREE new names appear this month in the Foreign Advisory Committee of The World Calendar Association, printed on Page 63. Lord Desborough takes a place on the committee, and representatives of Spain and Mexico are added.

Lord Desborough's name and personality are too well known to require detailed mention here, especially as his latest achievement in the cause of calendar reform is the subject of an article in this issue. Don Joaquin Gallo, representing Mexico, is the head of the Mexican official committee on calendar reform, director of the government astronomical observatory, and chief scientific spokesman for his country. Father Luis Rodes, S. J., representing Spain, is the head of the Jesuit Observatory at Tortosa.

Brief mention of the other members of the Committee may be made at this time. Prof. Stroobant is the Belgian government astronomer, and a member of a group of distinguished Belgian scientists who have lately made astronomical history by their discovery of a small heavenly body which recently approached the earth. Mr. Echlin of Canada is now in Europe as the representative of *Time Magazine* and a syndicate of Canadian newspapers; he has an article in this issue. Dr. Blume of Danzig was his government's representative at the 1931 conference on calendar reform. Mr. Herquier of France is the secretary-general of the Paris *Intransigeant*, author of many books and magazine articles, and also a leading factor in motion picture production in France. Abraham Frowein is a German industrialist and former president of the International Chamber of Commerce. Mr. Eason of the Irish Free State is a business and cultural leader in Dublin, head of an important printing firm. Prof. Giannini of Italy is a "Counsellor of State" in the Italian Ministry of Foreign Affairs and Secretary-General of the Council of Diplomatic Law. Mr. Mage of Switzerland is the Geneva director of the international movement for control of narcotics. Prof. Ihsan Ali of Turkey is a professor in the University of Istanbul and diplomatic representative of his country at many international conferences. Dr. Reyes, head of the Latin-American Committee, is a retired Chilean naval officer and former director of the national observatory at Santiago. M. Politis of Greece is a member of a family distinguished in diplomacy and prominent in the League of Nations.

FOR EVERY PEOPLE AND FAITH

By RABBI MARTIN M. WEITZ

Director B'nai Brith Hillel Foundation, Northwestern University

AS ITS ideal, The World Calendar Association might well have a dual offering to mankind: a World Calendar in Spirit as well as in Time, for every people and every faith. Perhaps a new spirit of social-mindedness and a "reverence for others' reverences" may well result from a calendar that is not only universal in scope but also social in content, for differing world communities—as religion or nation—enjoying their separate "days" in the common comradeship of a World Calendar.

These ventures indeed may become social adventures, may serve not only as a memorial to old ways, but as a challenge to new days. They may serve as the byways if not the highways to new horizons. And no horizon can belittle man as long as man is the horizon-gazer, even as no astronomy can make man small as long as man is the astronomer!

The calendar is a record not only of time, but of mankind's efforts at enshrinement of his experiences, which, by and large, have been and still are in the nature of crises. Crises have ever been nuclear to the calendar of religion. Group and individual crises have been the sources for every festival and ceremony which might have emerged from below the psychic patterns of individual and group. Thus birth, maturation, illness, marriage and death are the crises in the life of the individual and as such have brought forth a myriad of ceremonies and meanings to match personal experiences. Thus it is that baptism and circumcision, confirmation and *bar-mitzvah*, parallels among Jews and Christians, are responses to similar crises in the life of the individual.

Migrations, battles, and crops have ever been crises in the life of a group and from such three situations derive the interpretations for the festivals of all faiths. Perhaps Passover and Easter, as well as Chanukah and Christmas, obtain their unmistakably different meanings from common origins, as original crises later infused with supplementary spiritual values which in time displaced the original notes, though not time-element.

The human race might well be compared to the parable of the Exodus. Mankind is ever moving with a "pillar of light" before it and a "pillar of cloud" behind it, with hope ever before and memory ever after its many crises in the life of the individual and the life of the group.

In the current decade we hear much discussion, not only about the "revision of the calendar," not only about the shifts in social economies, but also about the reinterpretation of social and personal crises. Youth in general is indeed at the crossroads of crises and is looking for a "pillar of fire," even more than for a "pillar of cloud." Like the famous char-

acter in one of Ibsen's plays, world youth wish to come down from the rarefied heights of the cloud-crested peaks where visions are pure and dawns ever demure, and bring their frost-fretted sepulchres of the spirit even to the blasts of industry. They wish to test their ideals in the laboratory of life to find out whether or no they can be powerful as well as beautiful enough for their new setting.

It is in this spirit that we approach the calendar—in an attempt to reinterpret the festivals of the calendar even at the time the calendar itself may be revised. Thus a "revision of the calendar" will have the added value of a reinterpretation of its major "days," so that all of them, as much as possible, bear a social impress. Without violation to their origins, we may supplement them with new social meaning.

We hereby suggest the festivals of the Jewish calendar—since the author knows them best—as an illustration of what might serve as an indication, a point of departure as well as reference, for other great religions which could be interested not only in revision of the calendar, but also in a reinterpretation of their "days" for social advance.

Thus, in the calendar of Judaism, as an example, the New Year (*Rosh Hashanah*)—in the spirit of its tradition and modern need—may have as its vital message *the place of religion in the modern world*. Day of Atonement (*Yom Kippur*), the great day devoted to fasting and also to prophetic readings against such observances—itsself an early conflict later enshrined as "balance"—may stress *the remaking of human nature* as its motif. Feast of Tabernacles (*Sukkoth*)—likewise a later "balance" from early "conflict," inasmuch as this festival devoted to joy is accompanied by special reading of a saga of sorrow and a vision of "vanity," Ecclesiastes—may have *sanctity of joy and simplicity* as its primary theme. The Festival of Light (*Chanukah*), already transfigured from a victory of the sword, in commemoration of the Maccabees, to a victory of the spirit, might become a *festival of Jewish youth and hope*. Feast of Lots (*Purim*), in which story perhaps fancy has outlived fact and in which "Mordecai" and "Esther" are perhaps word-descendants and sublimated versions of "Marduk" and "Ishtar," might be a synthesis of the spirit of frolic for its own sake and high seriousness derived from Jewish survival and its relation to the social phenomenon of "dislike for the unlike." Passover (*Pasech*) may expand its saga about ancient freedom in a pastoral-agrarian setting—itsself an enshrinement of a simple spring festival—from a commemoration of freedom in a simple semi-agricultural pattern of life, to a challenge of "freedom" in a complex industrial pattern of life. Pentecost (*Shevuoth*), a holiday devoted to the Torah—which in Hebrew means "teaching" as well as "Law"—might have as added value, *Love of Learning and Love of Nature*.

What is suggested above as possibilities for supplementary values in the present festivals of the Jewish calendar might similarly be attempted with major holidays of other religious calendars. Many of the Jewish and Christian festivals, no doubt, stem from common sources, or are outgrowths one from the other. Thus, Easter, derived in part from Passover, is a holiday of resurrection at the spring solstice when the earth itself is in literal resurrection. Christmas, similarly, occurs even as Chanukah does, about the time of the winter solstice. "Days" in Christian, Mohammedan and other religions, even as the festivals of Judaism, might be reinterpreted—*without loss of their present status, but with added social content*—and better so, if they can be done within a system of calendation as is now presented by The World Calendar Association which offers a minimum of misunderstanding with a maximum of universality.

Not only old religious festivals could have new meanings; secular holi-

days also, in America especially, can stand social advance and more effectively so under the auspices of an American unit in The World Calendar Association. Thus a number of American holidays, especially the two in February, by virtue of the significance of men like Washington and Lincoln, whose births they commemorate, can serve as "birthdays" for social attitudes supplementary to and largely derived from the character and contribution of these Americans.

Over a hundred incipient but nevertheless incendiary Fascist groups are now trying to "purge" such great days from their original social content in behalf of their "slant" on political unity. They forget that cultural plurality as well as political unity form the dual significance not only of these "days" but of creative America. And how can even political unity be creative—and not coercive—without cultural plurality? Indeed a challenge for a Social Calendar!

During recent years, fortunately, a great group of liberals found they could honor Washington in the finest American way by adding his great ideal of tolerance to the celebration of his birthday, and by making the occasion a day of national significance as Brotherhood Day, in which churches of a continent and faiths of a free land participated, a "day" devoted to "make America safe for differences."

As Washington's Birthday now has the added value of interfaith-fellowship, so easily related to the spirit and derived from the writings of Washington, so, too, Lincoln's Birthday may serve equally for a message inter-racial in scope and spirit, so that this day, too, may be enhanced with social aims—and thus added personal tribute to—the "Great Emancipator."

Other "days" in the American year suitable for consideration in an attempt at a Social Calendar are as follows:

FEBRUARY: *Consumer's League Sunday*, initiated by the National Consumer's League in 1924; *Anti-Narcotic Day*, originated by civic leaders in 1927.

APRIL: *Health Week*, first proclaimed in 1924; *Prison Sunday*, suggested by National Commission on Prisons and Prison Labor; *Play Week*, inaugurated by Playground and Recreation Association; *Housing Sunday*, started by National Housing Association; *Youth Week*, initiated by National Youth Commission.

MAY: *Youth Day*; *Child Health Day*, first proclaimed by Governor of Ohio, 1924; *National Music Week*; *Mother's Day*; *Peace Heroes' Day*, inaugurated in 1924 by Peace Heroes' Memorial Society.

JUNE: *Tree-Conservation Day*, started by National Farm School; *Children's Week*; *No-More-War Day*, initiated by National Council for the Prevention of War.

JULY: *Independence Day and Inter-dependence Day*.

SEPTEMBER: *Labor Day*; *American Indian Day*.

OCTOBER: *Fire Prevention Day*; *Boys' Week*.

NOVEMBER: *Armistice Day*, as a dramatization in behalf of peace rather than war; *Father and Son Week*; *Education Week*; *Thanksgiving*.

DECEMBER: *Anti-Tuberculosis Sunday*, initiated by National Anti-Tuberculosis Association.

These by no means exhaust present American possibilities for a Social Calendar that could well accompany a "Revised Calendar."

CANADA URGES UNITED ACTION

By PHILIP MACAROW

in the Toronto News Weekly, *Saturday Night*

THERE is a movement on foot to reform the calendar. It is a movement in which Canada, in common with other civilized countries, will be expected to participate. The proposed reforms are neither vague nor remote; they are specific and imminent. Indeed, it now appears that 1938 may be the last of our old familiar years; that January 1, 1939, may usher in a really new new year. Hence, anyone who has anything to say about it had better say it now.

Any discussion of the proposed reforms demands some knowledge of what is wrong with our present calendar. It must be admitted that quite a lot is wrong with it. It is—say those who wish to change it—clumsy, inconvenient and lopsided, besides being ridiculous. An ordinary year (that is, a year which is not a leap year) contains 365 days which our calendar endeavors to divide into twelve months and fifty-two weeks. It does so, in a manner of speaking, but the months are far from uniform and, instead of fifty-two weeks, we come out with fifty-two and one-seventh. We are in the habit of regarding six months as half a year, but actually the first half of the year—January to June inclusive—is three days shorter than the second half, and our quarters are not really quarters at all.

The fundamental source of the trouble, of course, is our attempt to establish a relationship between two unrelated time units, the day and the year, both of which are of basic importance in human affairs and over neither of which have we any control whatever. We must count time by days but, since we have summer and winter, spring and autumn, we must also reckon with the year. Now a day is the space of time it takes the earth to revolve once on its axis and a year is the space of time it takes that same earth to complete one circle in its orbit round the sun. Unfortunately, there is no relationship between these two movements of the earth which can be expressed in simple arithmetic, so that only once in every 43,200 years does the solar year begin within one second of midnight.

Advocates of calendar reform admit the difficulties but condemn the way we meet them. Our present calendar, they say, is a primitive affair (it dates back to the times of Julius Caesar), badly in need of overhauling. They attack it not only from a scientific and rational angle but from a practical point of view as well. Its irregular structure makes a comparison of statistics for one quarter with those for another difficult and misleading. Every year differs from every other year, with the result that it is absolutely impossible to tell on what day of the week a given date will fall—or

vice-versa—without recourse to calendars or long and laborious reckoning.

The allocation of thirty, thirty-one and twenty-eight (or twenty-nine) days to the various months is another matter of much practical confusion. Most people cannot even remember which months have thirty days and which have thirty-one except by the old jingle:

Thirty days hath September,
April, June and November,
All the rest have thirty-one,
Except the little one alone,
Which has twenty-eight in fine,
Till Leap Year brings it twenty-nine.

Why this should be so, why we should have seven months of thirty-one days, four of thirty and one of twenty-eight (or twenty-nine) is a matter for which no one can now give a satisfactory explanation. It has its origin in certain remote considerations of possible importance in the time of Augustus and has perpetuated itself in spite of its inconveniences. That we have become accustomed to these inconveniences does not alter the fact that they exist and make themselves felt in loss of time, loss of energy and confusion of many kinds.

All this inconvenience and confusion would disappear at once if we could rearrange the calendar so that the days of the week and the days of the year would fall always in one prearranged order. To do this it is only necessary to construct a calendar which will be the same every year and so simple it can be memorized by anyone. Obviously, such a calendar must contain exactly fifty-two weeks. This is the most important aim of every plan of calendar reform.

How can it be done? So far no fewer than 185 methods have been suggested. Of course, many of them contain only slight variations and many more are too fanciful or too drastic for serious consideration. The workable, practical suggestions boil down to two: a year of thirteen months and The World Calendar plan.

Under the thirteen month plan, a new month with the tentative name of "Sol" would be added to the calendar. Every month would be exactly like every other month, containing precisely twenty-eight days or four weeks. At the end of the year, an extra, nameless, dateless day would be added to round out the necessary 365. In leap years, two such days would be added. The world would then have a simple, perpetual calendar under which most of our present difficulties would disappear. Unhappily, however, a new set of difficulties would be introduced.

First, the number thirteen is not divisible into halves, quarters or sixths. It is not, in fact divisible into anything at all without the use of fractions. Second, all monthly accounting of annual items, such as rent and interest, would have to be figured in terms of a thirteenth of a year.

The number thirteen, which is difficult to figure with, would occur billions of times a year in every-day reckoning. Third, all routine activities which occur in the course of a month such as paying bills, getting out statements, attending meetings and collecting statistics, would have to be repeated an extra time each year. These objections are so formidable and weighty that the thirteen month year has already encountered a tremendous amount of opposition.

There remains The World Calendar plan. This plan retains the present twelve month year and so escapes most of the disadvantages of the thirteen month plan. But it rearranges the months into a more orderly and balanced structure, containing two equal halves and four equal quarters. Each quarter consists of three months; the first month has thirty-one days, the remaining two have thirty. These quarters also comprise exactly thirteen weeks each, or ninety-one days, of which thirteen are Sundays and seventy-eight week-days. It is not quite as simple as the thirteen month calendar in that its months are not all the same length. But its quarters are. Every three month period is exactly like every other three month period, and the calendar as a whole is perpetual in form and reasonably easy to memorize.

Like the thirteen month plan, it provides an extra day to round out the year. It places this day at the end of December and calls it "Year Day." In leap years, a similar day is added at the end of June. Since, under The World Calendar, January the first always falls on Sunday and since, under our present calendar, January 1, 1939, will fall on Sunday, a determined effort is being made to put the plan into effect in 1939, so that the old calendar may merge into the new with a minimum of disturbance and confusion.

To secure such a result, simultaneous and nearly universal action must be taken by the parliaments and legislatures of the world. It is possible that it will be taken, for calendar reform is now receiving organized support all over the world. Fourteen countries, including Canada, possess associations dedicated to that purpose and most of them support The World Calendar plan at least in principle. In 1931, at Geneva, a conference of delegates representing 44 nations expressed their views on calendar reform. All agreed that it was bound to come. Rejection of the thirteen month plan and interest in the twelve month plan were expressed by Great Britain, Germany, Italy, Japan, Belgium, Greece, Irish Free State, Netherlands, Sweden and Switzerland. Two of these, Switzerland and Greece, gave definite commitments on behalf of their governments for the twelve month, equal quarter calendar.

Canada's position at that conference was perhaps a little unfortunate. The Canadian delegate, acting under instructions from Ottawa, cast a definite vote for the thirteen month plan and had the doubtful comfort of being supported by the delegate from Jugo-Slavia and no one else! Thus, Canada's official position at the moment favors the thirteen month plan.

Since then, however, the Canadian Rational Calendar Association, with headquarters in Toronto, has been formed. The stated purposes of this association are: (1) To secure withdrawal of Canada's official endorsement of a thirteen month calendar. (2) To advocate world-wide adoption of a national perpetual twelve month equal quarter calendar. (3) To inform public opinion on the defects of the calendar now in use. (4) To promote the adoption of a stabilized Easter along the lines of the British Parliamentary Easter Act of 1928.

Ingenious and rational as the proposed World Calendar appears to be, no one can foresee all the consequences of a change in the calendar. In the past, whenever such changes have been made, they were accompanied by riots and bloodshed resulting largely from the deeply rooted belief that the calendar is a divinely appointed institution which must not be tampered with. Even today, enlightened though we are, there will undoubtedly be objections to calendar reform on religious grounds.

Without subscribing to such objections, no one can question the right of the objectors to make their objections known. Indeed, the practical point of this whole discussion is that anyone who does object to calendar reform—whether on religious, rational, scientific or practical grounds—will do well to make his or her objections known with all possible speed. Similarly, those who favor reform, either along the lines of The World Calendar plan, the thirteen month plan or any other plan, ought to give expression to their views in a manner that will reach the sometimes none too keen ears of our law-makers. Only in this way can the Canadian government be expected to act in accordance with the wishes of the Canadian people when next that government is called upon to state its position with regard to calendar reform, and possibly to back up its position with legislation which will call a new calendar into being in this Dominion.

ACTION BY INTERNATIONAL LABOR OFFICE

CALENDAR REFORM appears on the agenda of the April session of the Governing Body of the International Labor Office at Geneva, as a result of the strong resolutions passed by the South American governments at the Santiago Labor Conference of January 1936. The text of the Santiago resolutions is printed in full on the inside back cover of this issue of the *Journal of Calendar Reform*. The International Labor Office has been an advocate of calendar revision since 1928, and has fully supported the League of Nations program on this subject.

CHANGE OF ADDRESS

OFFICES of The World Calendar Association are being moved from 485 Madison Ave., New York City, to Room 903, International Building, 680 Fifth Avenue, New York City.

WORLD LOOKS AT TIME MEASURE

By CLYDE A. MANN

Managing Director, Certified Building Registry of the U. S.

In the "Science of Progress" Magazine, March, 1936.

IT need not cause surprise to learn as the writer has, recently, that the measure of time, the Gregorian Calendar used daily throughout the civilized world, has proved so faulty in various ways that it seems likely to be replaced by another called The World Calendar. Neither need one be surprised to learn that the processes by which that change will be brought to pass have been necessarily world-wide and tedious of completion. It will be important in every walk of life, for "in conscious evolution time is of vital importance."

The task which confronted and still confronts those who have devoted years of time and large sums of money to the needed reform of the accepted calendar was made complex by the fact that today there is no international authority to decree this change, as there was when in 1582 Pope Gregory decreed the calendar used today and therefore called the "Gregorian." Then ecclesiastical authority was all but supreme; at least it was centralized. Times have changed since then. Now the change can come about only through a common consent based upon understanding of the many reasons for a change.

Those reasons are primarily monetary, prompted by handicaps to business caused by the use of the present yardstick. Representation of governments, railroads, commerce of all kinds, construction undertakings, the chamber of commerce, of state-wide, national and international scopes, have been responsive. Also educationalists, especially those concerned with public schools, have urged reasons of their own. The ecclesiastical sentiment with regard to Easter—the date of which fluctuates with the years even 35 days—has added other reasons, all impelling change.

It is obvious that to the accounting of governments, of bankers, of manufacturers, of builders, of shippers, of insurance companies, the inequality of the number of days in each "quarter" of the year as well as inequality in length of months causes confusion which creates uncertainties and inaccuracies. The Gregorian Calendar had little consideration for regularity or perpetuity of dates, for the old jingle tells us that Thirty days has September, April, June and November; all the rest have thirty-one excepting February alone, which has but twenty-eight in fine till Leap Year gives it twenty-nine. The years do not start on the same day of the week and neither do holidays fall upon the same day of the week year after year. Easter varies widely in date. The quarters are 90, 91, 92

and 92 days, a variation which throws comparisons out by two per cent.

There are no duplicates of years except at intervals of as much as six years, and even eleven years, so it cannot be memorized; new printed calendars are needed each year. The anniversary of any event will recur on the same day of the week but eleven times in any century. The number of work days in the months varies from twenty-four to twenty-seven (without considering holidays) and this proves a serious handicap to the computing of labor costs of any construction work or undertakings of other sorts. This variation of work days in a month amounts to as much as $12\frac{1}{2}$ per cent, quite too much to be further ignored. Our bothersome Gregorian Calendar causes anniversaries and fixed dates to fall sometimes on Sundays, making their observance difficult or impossible.

The world has been awaking to the need for some change in the yardstick used for time measurement during most of the years since the decree of 1582, but it has only been in recent years that anything effectual has been done about it. Two plans have been offered; one of them, with the chief merit that months will be of uniform length, proposes a 13-month year, each month of 28 days, a total of 364 days and with another day added, called "Year Day," to make the 365. A day in Leap Year is to be added after June 28th. The new month proposed has been called "Sol." This, of course, is such a radical upset of custom, besides involving calculations by the divisor 13, that it may not be considered as a serious proposal. Not so The World Calendar, for which there have been endorsements from the British Parliamentary committee and those of Switzerland, Germany, Italy, from official spokesmen for Turkey, France, Japan and other countries. The International Chamber of Commerce, in an official report, remarked, "There is no longer any reason for the anomalies of the Gregorian Calendar and it is surprising that they have been kept."

The United States Chamber of Commerce has taken action urging that the United States Government participate in an international conference called to formulate a plan for calendar reform and it will be through such procedure that the change can be brought about. Ecclesiastical authority no longer is great enough to bring the change to pass. Instead, the official statement from a special committee of the League of Nations has cleared the way officially for general adoption, about 1939, of The World Calendar. That official statement by the League committee included this indictment of the Gregorian Calendar for the vast business of the countries of the world in this year of 1936:

"All calculations of salaries, interest, insurance, pensions, leases and rent which are fixed on a monthly, quarterly, or half yearly basis are inaccurate and do not correspond with one-twelfth, one-quarter, or one-half of the year . . . banks are obliged to make constant use of special tables . . . the calendar is not perpetual; it changes each year. . . . Dates

of periodic events can never be fixed with precision. . . . The position of the weeks in the quarters varies each year . . . and complications accordingly arise in the reckoning of accounts, statistics, etc."

The world-wide discussion which has been raised about the need for a calendar improvement has had the effect of promising the discarding of many calendars other than the Gregorian when The World Calendar comes into use. In India alone there are several in use; but there also are the Julian, the Armenian, the Coptic, the Syrian and the Mohammedan. Church leaders are outspoken in saying that adoption of one calendar for the world has religious significance and it will have effects in dissolving the boundaries between men and races to meet the need created by miracles in transport, communications and commerce of recent years.

The prospect of change makes The World Calendar plan of general interest, a step toward better balance. In this plan New Year's Day falls perpetually upon Sunday; a "year end day" has been provided following December 30th, as an extra day; the Leap Year Day follows June 30th.

The solar year will continue to govern the affairs of mankind through this calendar when adopted, a period of a little more than 365 days. Reduced to weeks, the ordinary year has $52 \frac{1}{7}$ weeks, but every fourth year $52 \frac{2}{7}$. This explains why a given year's Gregorian calendar has been repeated only eleven times in a century, and why each year is different. The week has not been one of seven days since the days of Constantine only, but way back in Chaldean and Egyptian times the custom of that division of time began. The Jews, of course, made much of it, with one day of seven for rest. That custom, still followed by Christians in Rome of keeping one day for rest and meditation, according to Biblical injunction, appealed to Constantine; he found men and women were happier, lived longer and could do more work.

The patient effort of procuring from all parts of the world and many walks of life—ecclesiastical, astronomical, governmental, transport, education and others—the response to inquiries whether it was not thought time to correct an inaccurate measure of time; then with evidence in hand of the need, offering for consideration (in many languages) the new calendar plan proposed, has gone quietly forward with notable success. It has been carried on by The World Calendar Association, at the head of which is an indefatigable woman, Miss Elisabeth Achelis. Her zeal is not for reward, but, like many activities of progress today, for world advancement in the zone which interested her, as the telephone arrested the energies of Bell, the wireless those of Marconi, and so on across the page of progress. Mind, infinite, has worked through many patterns and found expression. The increasing need for common consent has been very clearly defined and there is reason to expect acceptance in about three more years.

FOLLOW THE KING!

By ERLAND ECHLIN

Secretary of the Rational Calendar Association of Canada

WILL Great Britain, which has already advanced farther along the path of legislative calendar reform than any other Great Power, signalize the new era which is marked by the accession of its new King by taking up the world leadership in this movement for revision of the international system of time measurement?

The night the King of England died I was at Dorchester House, that swank modern hostelry in London's Park Lane, reviewing a full dress rehearsal of the performance planned for the following evening. In the middle of a musical number the managing director entered, crossed quietly to the front of the low stage, held up his hand: "We have received very bad tidings of His Majesty. His life is coming peacefully to its close . . . everyone please go home. There will be no more rehearsals, no opening . . . we will let you know when you are needed." Though it meant complete revision of the social schedule and an actual monetary loss of thousands a day, there was no impatience; only compassion for the royal family. Later I was told, "Yes, it is unfortunate, perhaps, but with the new King will come a new era."

Signs of the new era began at once. Within five days Edward VIII had smashed half a dozen precedents and at least one tradition. Court mourning was cut by three months, public mourning to seven days. The monarch had appeared hatless in public and before thousands of people he had run down the steps of Westminster Hall—because he was in a hurry. In his first address to Parliament Edward VIII was unbelievably brief and used "I" instead of the traditional "We" of royalty.

After weeks of rain, fog and dull weather, the first day of Edward's rule was clear and sunny—"King's weather." But the sun had scarcely risen that first morning before the new King had performed an act that may be construed as heartening to all those interested in the measurement of time. For thirty years the clocks at Sandringham had run half an hour fast—for the grandfather of the present King liked to keep people on time; and later appreciated the extra daylight. Edward VIII's first kingly action was to have the clocks throughout the 90-room cottage adjusted to correct time.

The act is significant. England follows Germany, Italy, Austria, Russia and many nations of the Balkans and Near East with a comparatively young man as leader. Almost alone, France has still to make her selection. These leaders are keen, modern-thinking post-war prod-

ucts anxious to simplify both business and the business of life. It can scarcely be doubted that their weight will be on the side of progressive people everywhere who are striving for swift reform of the calendar. Or that, under their influence, the next few years ahead will show the peak of progress.

Viewed comparatively, this progress has been astounding. It took 15 centuries to change a calendar that was actually incorrect in its operation and another 150 years before the obviously correct and necessary alterations of Pope Gregory XIII were adopted by Protestant Europe. Yet I venture to say there has been more progress in reform of the calendar in the past five years than in the previous two thousand.

There have always been calendar reformers. Their ingenious schemes over the centuries number thousands. Most have been local, prompted by the needs of groups or personal inventiveness; a few with wider inspiration have received wider acclaim. None has made the universal appeal of The World Calendar with its equal quarters and balanced years, its symmetry and balance, its harmonious arrangement and its convenient perpetuity of form.

Best advertised—especially during the early part of this present century—has been the 13-month scheme. In one sense it has retarded real reform; in another, assisted it. Many persons, with the understanding minds of true "world citizens," dropped consideration of calendar reform the moment they heard "13 months." No superstition hung over them, indeed they brought forward but one statement to account for their lack of interest. In effect, they said: "Of all numbers, why select the most awkward as a base for our time calculation?"

On the other hand, it has undeniably attracted attention to the defects of the calendar we use. It has again illustrated the old call of like to like. Compiled out of the past by a Yorkshireman temporarily domiciled in Canada, Mr. Moses B. Cotsworth, it was planned with both eyes full on the needs of certain highly organized industries. From one of these, with plants scattered over the globe, it received most of its support. After a brief run as a novelty before the public, it has again reverted to what it was intended to be—a highly specialized accountancy calendar.

The World Calendar is founded squarely on humanity's will to progress. No race, creed, sect or group is specially served—it is for the whole. The World Calendar respects custom, tradition and the beliefs of the people. Because of its simplicity and the disinterested sincerity with which it has been propagated, it is fated for early success. When, a short time from now, year follows year under the harmony and balance of The World Calendar, mankind will realize that another important forward step has been taken in the history of life.

It may do more. By some magic spiritual alchemy the improved bal-

ancing of time may help quench hatred, war-fires, uncertainties that try the souls of men.

These are not wholly my own views. For the second time in the past eight months I have just completed a round trip of continental Europe—from the old northwest provinces of Russia down to Rome. Of the Old World's thirty chief countries, twenty-five are represented by membership in The World Calendar Association. Eleven nations have active committees working for the adoption of The World Calendar. I talked with members and committees in every country I visited, and from these conversations formed the views expressed here.

The World Calendar is forging ahead. The Protestant Church and the Eastern Orthodox Church now no longer merely favor "calendar reform"—they are lined up behind The World Calendar. Many highly placed Roman Catholics, laity and clergy, support the reform. From my conversations in Rome I have no hesitation in saying that when the Holy Father is convinced that it has the approval of his world family, the question will receive his earnest consideration. And when it reaches that stage, reform is at hand. He is already known to heartily disapprove the 13-month scheme.

No one is more aware of the growing universal support of The World Calendar than the nations in council at Geneva. The subject comes up for discussion again this year, and it is certain that as a result the actual planning stage will be appreciably nearer. The newest reports at the League indicate that strong national support from both the Americas will be forthcoming. And the largest nation of Western Europe—Germany—is organizing a new World Calendar committee which will function under the eye of the Department of the Interior itself.

Great Britain is in a class alone. Most nations link the fixation of Easter with calendar reform—but only in England has any parliament actually passed laws to provide for this. Here England leads, for such an Act stabilizing Easter has been on her statute books since 1928. And I would like to suggest that, under the new King, new life is given to every forward-looking movement. Viscount Castlerosse said this week: "He is a modernist. . . . King Edward VIII lives very much in the future. . . . His reign will, I fancy, become famous as a go-ahead period."

As the President of the United States attracts the attention of the New World, so the King of England influences the older nations of Europe. Despite vast differences of race, creed and color, he is the one man everywhere acclaimed as worthy of attention. His first act with the clocks at Sandringham showed a time consciousness encouraging to calendar reformers. Who, in the interests of simplicity and accuracy, will follow the King?

DIALOGUE BY RADIO

In a course of science talks by radio, supplied by the famous Franklin Institute of Philadelphia to the audience of Station WCAU—better known as the Boake Carter station—Professor James Stokley of the Institute occupied a 15-minute period with a discussion of calendar reform, given in the form of a dialogue with Major Thomas Coulson as master of ceremonies. The dialogue, as broadcast on January 11, is reprinted here in response to many inquiries for a model radio talk on this subject.

COULSON: And here's Mr. Stokley. I think that he's going to tell us something about the calendar—— Is that right, Mr. Stokley?

STOKLEY: Yes, Major Coulson. You know ordinarily we take the calendar for granted. In just the same way we never pay much attention to the parts of our body, until we have an ache or a pain. But this is the year when we have one of the aches that calls our attention to the calendar.

C.: What do you mean?

S.: Simply that this is leap year. Next month we add the extra day that has to be inserted regularly to keep the months in step with the seasons.

C.: Why isn't it possible to have a calendar that doesn't need to have a leap year?

S.: Because it has to measure two different units that cannot possibly be fitted together exactly. In that respect the measurement of time differs fundamentally from our measures of length, weight, area and so on. These units are selected so that there is always an even number of the smaller ones in the larger—that is, there are just twelve inches in a foot, not twelve and 496 thousandths. There are exactly sixteen ounces in a pound, not sixteen and four-fifths.

C.: But there are also 60 minutes in an hour and 24 hours in a day!

S.: Yes, but there are the derived units. The day and the year are the ones that we start with, and they are both determined for us naturally. The day is the length of time that the earth requires to make a complete turn on its axis; and the year is, of course, the period during which the earth travels in a complete circuit of the sun. Roughly, we often say that there are 365 days in a year. After the earth has turned 365 times on its axis it has almost made a complete trip around the sun, but not quite. It has to make about another quarter of a turn before the trip is completed, so that it is more accurate to say that there are $365\frac{1}{4}$ days in a year. If you want to be still more precise, you can say that the number is 365 and 10926/86400 days. But even this is not perfectly exact. As a matter of fact, no matter how many figures you use in your fraction, you still cannot express the exact number of days in a year. As the mathe-

matician says, in his technical way, the two figures are incommensurable.

C.: Yes, that does make it rather complicated!

S.: But that's not all. There is also a third natural unit, the month, which was originally the time that the moon takes to go through a complete cycle of changing phases, a little more than $29\frac{1}{2}$ days. And that does not fit into either the day or the year.

C.: The Mohammedans use the lunar month in their calendar, do they not?

S.: Yes, they use it and so do the Jews. The ordinary Jewish year has twelve months, of 29 and 30 days alternately, making the average length $29\frac{1}{2}$ days, which is almost correct. But this only comes to 354 days, or eleven days short of the year length, so, if this went on, the calendar would drop a month behind the seasons every three years, and the same date would sometimes come in summer and sometimes in winter. To prevent this, an extra month is inserted about every three years, and this keeps the calendar from getting more than a month out of step with the seasons.

C.: Does the Mohammedan calendar work the same way?

S.: Not quite. Before the time of Mohammed the Arabs used practically the same system, but the prophet told them that twelve was the number of months according to the ordinance of God, and that thirteen months was contrary to the divine appointment. So ever since his time their calendar has been based solely on the moon, and they let it get out of step with the seasons. After all, there isn't as much change in the seasons in most Mohammedan countries as there is in temperate regions, and it was very easy for the early peoples to observe the changing phases of the moon.

C.: Our own calendar came from the Romans, didn't it? What was theirs originally?

S.: A combination of the sun and the moon. They had twelve months of 29, 30 and 31 days in length, making a year of 355 days, which, of course, regularly got out of step with the seasons. So they added a month occasionally to bring it in step again. But the business of putting in the extra month was left to the magistrates, and this was a nice source of graft. If they wanted to stay in office a little longer, they could just add an extra month. Thus, when Julius Caesar came into power, he found the calendar in what may very properly be described as a mess!

C.: And Caesar fixed things up?

S.: Yes. First of all he called in expert advice, in the person of an astronomer named Sosigenes. Then he threw the lunar month overboard completely. He took the length of the year as just $365\frac{1}{4}$ days, which was the best value available at that time. He decreed that thereafter the ordinary year should be of 365 days in length, divided among twelve months.

Thus, in four years, the calendar would be a full day behind, so then would come a year of 366 days to bring them into step once more. This was the beginning of the leap year.

Caesar began his calendar in the year 46 B.C. Because of the way the earlier calendar had been tortured, the beginning of spring was coming in May, so he lengthened this year to 445 days. The next year the beginning of spring came on the 23rd of March, and the year began at this time. Such was the origin of the Julian calendar.

C.: How long did it continue in use?

S.: Until the present day, to some extent. The Greek Orthodox Church still uses it. Maybe you noticed in the papers that they celebrated Christmas last week.

C.: But most countries changed from it many years ago, didn't they?

S.: Yes. The trouble with the Julian calendar is that the year isn't exactly $365\frac{1}{4}$ days in length, but 365 days, 5 hours, 48 minutes and 46 seconds, or a difference of 11 minutes, 44 seconds by which the Julian year is too long. This amounts to just a little more than three days in four hundred years. By the year 1582, the dates had dropped back about twelve days, and the beginning of spring was on March 11. This meant that Easter was gradually coming earlier, and, if things went on, would have come in the middle of winter. So the Catholic church took a hand. Pope Gregory XIII, following Caesar's excellent precedent, called in an astronomer for advice. His name was Christopher Clavius, and as a result of his suggestions, the Gregorian calendar was decreed by Papal bull in 1582. . . . To bring the calendar back to the time, not of Caesar but of the Council of Nice, held in 325, when the rule for the date of Easter had been adopted, ten days were dropped completely. The day after October 4, 1582, was not the fifth, but the fifteenth. And then, to keep the correspondence as close as possible, it was arranged that three leap years should be eliminated every four centuries. The rule adopted was that every year which could be evenly divided by four would be a leap year, unless it was the beginning of a century. In that case, it would have to be divisible by 400. Thus, 1600 was a leap year and 2000 will be one also, but 1700, 1800 and 1900 were not.

C.: How accurate is the Gregorian calendar? That is, how long will it be before the slight remaining error will become noticeable?

S.: After 3000 years, the calendar will be a day early.

C.: I suppose that we do not have to worry about that for a long time to come, then! But what are the calendar reforms that are now being discussed?

S.: Solely in the arrangement of the days and months within the year. Such a reform wouldn't be nearly the drastic thing that happened in 46 B. C. and 1582, except that our modern life is so much more complicated and

more sensitive to change. Anyhow, we wouldn't have to drop any days from our lives, and that was one of the chief complaints when the Gregorian calendar was adopted in England. Do you recall what year that was?

C.: I believe it was in 1752.

S.: Yes, I think it was. But you know that there were riots, and at Bristol several people were killed. By that time the difference was eleven days, and the people cried, "Give us back our fortnight," even though the act of Parliament had been carefully drawn to prevent any injustice in the matter of interest, rents, wages or other payments due.

C.: Why do the modern reformers want to change the arrangement of the months?

S.: So that the same day of every year will come on the same day of the week, and so that the year can be divided more evenly than at present. Now, for example, the second half of an ordinary year contains 184 days, three more than the first half. The quarters vary in length from 90 to 92 days, and the months from 28 to 31 days. In bookkeeping, and statistical work, for instance, these periods are hardly comparable, because of their different length, and, if you are paid by the month, you do a lot less work for your salary in February than you do in January.

C.: How can this be avoided?

S.: There are two principal schemes that have been suggested. One group would like to have every month the same length, and have every day of every month come on the same day of the week. Thus, each month would have to be four weeks, or 28 days, in length. But twelve times 28 is only 336, so they propose to put in another month, which brings the year to 364 days. There is still an extra day left over, so the idea is to make this a very strange kind of a day—one that does not belong to any week. It would be inserted at the beginning of the year, as Year Day, and might well be a holiday, corresponding to our New Year's Day of the present.

C.: It seems to me that a year of thirteen months would be rather awkward!

S.: Yes, it undoubtedly would be. And superstitious people wouldn't like it, because the thirteenth of every month would be a Friday!

C.: What is the other proposal?

S.: The one known as The World Calendar. Its advocates are willing to have the months of different lengths, only by a day, but want to have the quarters contain the same number of days and an exact number of months, which is not possible with thirteen months. They would use twelve months, as now. The first month of each quarter, January, April, July and October, would have 31 days, and all the others 30. Each quarter would begin on a Sunday and end on a Saturday, and the same date would come on the same day of the week each year. January 9, for instance, would always be a Monday, June 12 a Tuesday, July 4 a Wednesday and Christmas a Monday. . . . Even in The World Calendar, however, there are only 364 days in the year that are regularly assigned to weeks, and so it also requires the use of a Year Day, and of a Leap Day, every fourth or eighth year, in accordance with the Gregorian rule.

C.: Do you think that such a calendar will soon be adopted?

S.: Perhaps. Certainly The World Calendar has many advantages over our present system, and also over the thirteen-month scheme. The proponents of the scheme have made great headway in the last few years, however, and they would like to introduce it in 1939.

C.: Why?

S.: Because that year begins on a Sunday, like The World Calendar, and the change could be made with very little confusion. Not until 1950 will a year begin on Sunday again.

FIXING CAESAR'S 12-MONTHS

By J. B. PERRY ROBINSON

Secretary of the Rational Calendar Association, London

Prizes for 1000-word broadcasting talks, to be used over the networks of the British Broadcasting Company, have recently been offered by the British monthly magazine *Mine*, published by Pearson's. As an introduction to the prize contest, the magazine publishes the following informative general article, written by the well-known publicist who will judge the submitted manuscripts.

REFORMING the calendar—that rather surprising ambition which possesses a large number of people to-day—was a favorite pastime of ancient dictators. Indeed, one of the first acts of Sargon invading Mesopotamia or Genghis Khan pouncing on India was to decree a new calendar for the conquered land. For in those days every conqueror brought his own religion, and every religion was based on agriculture, which needs elaborate calendars. In any case, nothing proved the success of a new conquest better than the establishment of a new calendar regulating the lives of everybody in the land.

There is no more convincing proof of the effectiveness of Julius Caesar as a dictator than the fact that practically all the world still uses what is really his calendar. Even the reason why February has only 28-29 days is that Caesar's successor, Augustus, having decided to name the eighth month after himself (as Julius had the seventh, July), could not allow his month to have only 30 days while Caesar's had 31, and so stole a day from February, then the twelfth month, and added it to "August."

An old story says that during his campaigns in Gaul Caesar "found himself going into winter quarters as the spring was coming on." There is probably a lot of truth in this jest, for at that time the old calendar of Rome was a very muddled affair, entirely in the hands of the priests, who were not very good astronomers and had let the year as they measured it get far out of step with the sun's year. If Rome had merely remained a small Latin state in the middle of Italy, this would not have mattered much, but she was beginning to spread an empire over the whole Mediterranean, and her merchants were finding that trade on an imperial scale demanded a more coherent and business-like system of dates.

So when he became dictator Caesar established a fixed calendar with the twelve months which we now use, and a fairly accurate leap-year system. (Leap years are necessary because the sun takes about a quarter of a day more than 365 to "go round" the earth, so that in every four years it gains a day on us, which we have to catch up by putting in an extra day.) How necessary Caesar's reforms were is shown by the fact

that the first year (46 B.C.) of his new calendar had to have 445 days before the years could start straight again. In Roman history it was known as the Year of Confusion.

Some say that the Roman Empire has never ceased spreading; certainly its calendar penetrates farther every year into the few remaining un-Westernized lands. Yet it is not really a very good calendar. Modern scientific industry and trade find that it has many inconveniences, such as quarters of unequal length (the first generally has 90 days, the second 91, and the last two 92), and months that sometimes have only $22\frac{1}{2}$ and sometimes 25 working days.

Such irregularities make it impossible to compile those exact statistics of production and turnover and profit on which, in these highly competitive days, the success of any business so largely depends.

It is as if the British Broadcasting Company tried to broadcast piano music on a piano that had different numbers of notes in each octave; or as if successive petrol pumps on the same stretch of road gave different quantities of spirit in their gallons, some giving 7 pints and some 9, some highly refined spirit and some quite crude.

There is also the very disturbing factor of a widely varying Easter, which throws the chief public holiday of the year backwards and forwards from one month, and even one quarter, to another. If it is very early—it can be as early as March 22—the weather is apt to be cold; people will not buy tennis shirts or ices or want *char-à-banc* trips or open-air sports on their holiday. The next year it may be very late—as late as April 25—and they will want all these things, and not want pullovers or heavy shoes or hot meals; and the trades (catering, outfitting, transport and entertainment) that the year before had to prepare for a wintry holiday have now to readjust all their stocks and advertising to meet a summer festival.

This disturbing arrangement we owe partly to a Council of the Church in A.D. 325, but principally to the next great calendar reformer after Caesar, Pope Gregory XIII, at the end of the sixteenth century. It is actually after him, and not after Caesar, that our calendar—the Gregorian System—is officially named. But so far as the calendar as a whole is concerned, all he did was to tidy up an inaccuracy in Caesar's leap-year method. Caesar had decreed a leap-year *every* four years, which is a little too often, and in the course of 1,500 years the sun had got ten days ahead of the calendar. So Pope Gregory cut the days between October 4 and 15 right out of the year 1582, and reduced the frequency of leap-years thereafter.

Pope Gregory's reforms were at once accepted in all lands where the Roman Church held sway. England adopted the reforms in 1752.

That was the last occasion when anybody did anything to Julius Caesar's calendar so far as this country is concerned. Since the war, however, here, as in most other countries, business men and merchants

have been asking for a new and radical reform of it. They and professional men, such as lawyers, schoolmasters and all whose lives are measured in terms, want a calendar which will be the same from year to year; a calendar in which Easter always comes at the same week-end, and Christmas is always, say, a Monday. With such a calendar there would never be any need to consult an almanac to discover when, say, the third Thursday in October was (it would always be the 19th) or what day of the week one's birthday will be (it would always be the same). One would have learnt the whole calendar in one's cradle, in the same way as one now learns the multiplication table and how to tell the time. A permanent almanac could be engraved on cigarette cases, watches, public clocks, etc.

It is quite simple to achieve such a perpetual calendar. All that is necessary is to make one day in the year a special day to be called by a special name; in other words, have fifty-two ordinary weeks and then when we come to the 365th day, simply call it New Year's Eve or some such name and not include it among the days of any week. Then the next year and all subsequent years will begin on Sunday.

To stop the variation in the date of Easter an Act of Parliament has already been passed (in 1928), but it has never been brought into force. This Act could become law at any moment, but it is more likely now to be incorporated in a general reform of the calendar.

Once a perpetual year is assured by the exception of this non-week-day, the remaining 364 days can easily be adjusted so as to make the months and quarters more uniform. The method most favoured by astronomers, Church people and other learned men, as well as by business people in this country, is to make the four quarters all have 91 days, with three months of 31, 30 and 30 days each.

Some people would like to divide these 364 days into thirteen months instead of the traditional twelve, by adding a new month of twenty-eight days, called "Sol," in the middle. But it is not likely that Parliament or any other body would accept such a drastic alteration, which in fact has little to recommend it. All the necessary measures of reform can be arrived at without disturbing Caesar's well-tried Twelvemonth.

MORE PROGRESS IN MEXICO

MEXICAN interest in calendar reform moves forward rapidly through high official channels. During the past month, two important conferences of cabinet members and other governmental leaders have been held in the office of the Minister for Foreign Affairs, Dr. Eduardo Hay. General agreement was reached at the first meeting as to the desirability of calendar reform. At the second meeting, a larger gathering of Mexican officialdom endorsed the verdict of the previous session, and discussed the comparative merits of the two plans of revision submitted by the League of Nations. Full official backing for The World Calendar plan is expected at a third meeting, and this will be followed by instructions to Mexico's delegate at the League of Nations.

ROMANCE OF THE CALENDAR

By P. W. WILSON

CHAPTER FOUR: THE CELESTIAL CLOCK

HOW was it that man evolved the calendar as a charter of coincidence? He achieved this purpose by cultivating the habit of thinking about that which is beyond himself, and many have been his calculations of time. There were days when flowers began to bloom, when butterflies broke from the chrysalis, when leaves fell from the trees. The Japanese celebrate the bursting of the blossoms on the cherry tree and other seasonal splendors. Botany—for instance, in early Greece—afforded a basis for some kind of a calendar, but it was a variable basis. Flowers bloom in the Spring—not however on a definite day.

Rivers were no more reliable. In Egypt, the Nile begins to rise in the middle of June. The great stream has thus spread a fairly definite solar year over the land of Egypt. But of what use to the Mesopotamian calendar would be the floods of the Euphrates? Nobody can say when precisely they will come.

So with the tides. They are regular. But they can only be observed on the seaboard. They have been useless—especially in days before rapid locomotion had been developed—as a calendar for inland communities.

What about the weather? Over much of southern Asia, the prevailing wind blows southwest from May to November and northeast from November to May. The Arabs thus call it the monsoon—a word meaning season. But would not the weather of Europe or of America afford a very speculative time table for the seasons?

Botany, hydrography, climate were thus found to be of limited value as a foundation for the calendar, and man—forgetting his rivalries, his enmities, his prejudices—has had to raise his eyes above a limited horizon to infinities beyond him. He gazes into the heavens “thick inlaid with patines of fine gold” where shine those “blessed candles of the night” by which time can be measured according to standards that are independent of human affairs.

For a child, it is a wonderful moment when he is invited for the first time to look at a watch and listen to its ticking close to the attentive ear. The case of the watch is opened and the infant peers with solemn eyes into the mysteries of the delicate mechanism—the wheels that move on jewelled axes, the wheels that do not seem to move at all, the quickly oscillating escapement, the hair-spring that pulsates like a living organism. This rapt countenance of a child thus absorbed in contemplation of what later will become a familiar possession suggests an attitude of wor-

ship, and this was the attitude of the men who, in successive centuries, moulded the calendar. It was as children that they gazed, day and night on the celestial timepiece, nor can we appreciate the processes whereby the calendar was evolved unless we try to see the universe as they saw it who dwelt on our planet thousands of years ago.

The heavens above them seemed to be one vast dial of a clock—but with this significant difference: The dial was splendidly and bewilderingly transparent. The enquiring eye looked not alone upon whatever in the sky might serve as pointers that tell the time. The vision was adorned by glorious irrelevancies. Man was fascinated and confused by the spectacle of a perpetual motion above him that was as elaborate as it was inexplicable.

The very perspective of the heavens—apparently a vault, actually an infinity—was deceiving. It was not the magnitude of a celestial body that determined its importance. Proximity to the earth—that was the deciding factor. A transient meteorite might weigh no more than a ton or two. Yet, flaming like a rocket, it outshone a cluster of stars billions of times greater than itself. In size, a planet is comparatively insignificant. But its placid and untwinkling disk mirrors an illumination that leaves the seven stars of Orion in a remote obscurity.

The science of astronomy is today marvellously elaborated. There are observatories—about 300 of them in active operation—which, like the multiple vision of an insect, glance in all directions at once. As the earth rolls round and round within the empyrean, every longitude and all save arctic latitudes are sentinelled by a cordon of sleepless watchmen of the night.

In magnitude, in complexity, in correctitude, where will we find any machine, even a printing machine or a locomotive—that can be compared with the coordinated intricacies of the greater among modern observatories? Here is much more than a telescope, however colossal may be that great instrument of vision. An observatory is a complicated mechanism of moving platforms under a revolving roof, of clocks and cameras and card indices, of microscopes in focus upon crossed lines spun by spiders, of logarithmic libraries of statistics. So powerful in its range is the observatory, yet so delicate in its adjustments that it might almost be described as the elephant of modern research. The elephant lifts a log, yet can pick up a pin, and so it is with the observatory. It surveys the infinite. Yet it discerns the infinitesimal.

Every few years, the telescope reaches what appears to be a maximum. It did not seem as if megalomania itself would be able to add size to the huge reflector on Mount Wilson which is 100 inches from rim to rim. Yet a mirror with a diameter of 200 inches—nearly 17 feet—has been cast for a telescope at Pasadena, also in California—a mirror that is 27 inches thick and weighs 20 tons. It is by far the greatest volume of glass ever

poured into one mould and the glass has to be perfect. Merely to cool the mirror is thus a process that continues over a period not far short of a year.

Such a reflector is like a wide-spreading net that catches scattered rays of light, and with such comprehensive capacity that it concentrates on the lens of the telescope a visibility which is 360,000 times that of the unaided eye. Telescopes had shown—let us say—about 500,000 stars. The new telescope may show three times that number.

The exactitudes of modern astronomy are thus astonishing. We realize that every moving body influences every other moving body and that no motion anywhere is absolutely uniform, whether in speed or in direction. The earth revolves on its axis. But its revolutions are accelerated or retarded. It sweeps round the sun once a year. But not in a perfect circle. The moon has its orbit around the earth. But it loses a second every three thousand years. There are no fixed stars. All of them are changing their relative positions.

But when was it that the marvellous machinery of modern astronomy first began to be made available for scientific use? We need not enter into the vexed question whether this man or that man—Descartes in France or Lippershinn and Jansen, who manufactured spectacles at Middleburgh in Holland, or Metius of Alckmaer, who amused himself with burning lenses of glass and ice and accidentally placed a concave and a convex lens at the end of a tube—should be accorded the honor of inventing the telescope. Enough for us that it was Galileo who first applied the telescope to the pursuit of astronomy—that his three successive and rudimentary instruments merely magnified a distant object respectively three times, eight times and thirty times. At no previous date was there any use of the telescope.

It is to the prolific period of Galileo that we must also attribute the microscope, and in 1614, John Napier, a Scotsman, published the first table of logarithms. Kepler actually anticipated telephotography. But the general use of the camera came much later—indeed, within living memory—and so with the spectrum. Only in 1672 did Newton notice that light, passing through a prism, was broken into the colors of the rainbow and spectroscopic analysis of the rays from stars is among the latest of astronomical researches.

We are thus confronted by what is surely a somewhat astounding paradox. The calendar, derived from the sun, moon and stars, dates from the dawn of history. Yet the mechanics of astronomy by which in these days we study the sun, moon and stars are no more than three hundred years old. Little or nothing of it was known at an earlier period. Astronomy is thus the one science that may be said to have antedated its own equipment.

We read accounts of ancient observatories which are said to have been very wonderful. Are there not more or less vague traditions of such observatories in classical times? May not the Egyptians have used the Pyramids for some astronomical purpose? Have there not been exquisite astronomical instruments at Pekin? Did not Tycho Brahe build for himself an elaborate observatory at a mansion in the island of Hveen off Denmark which he called Uranienbourg?

There were such observatories and doubtless they were furnished with beautiful instruments. Astronomy, like war and industry and religion, was pursued—especially in mediaeval times—not merely as an occupation but as an art. If the mediaeval craftsmen made armour—whatever they made—they were not satisfied unless they had covered their handiwork with ornament which had and still has a high aesthetic value. So was it with instruments used by the astronomer.

But when we examine the actual utility of these beautiful affairs, what do we discover? They serve two purposes, and each of the purposes is elementary. First, they provide what is equivalent to a stone set in the ground, from which light can throw a shadow that moves and can be measured. Secondly, they provide the equivalent of a stick that man can apply to his eye and aim at a distant object. The stone with its shadow and the stick with its direction—these were the elementary weapons with which alone man was accoutred as he set forth on his expedition to conquer his universe. Until a recent period, they were man's only weapons.

On the highlands around Cuzco in southern Peru—more than 11,000 feet above sea level—the Incas raised cylindrical pillars and, by measuring the sun's shadow, they calculated the solstices. In order to arrive at the equinoxes, they set a pillar in the center of a circle across which was marked a diameter, east and west. When the shadow was at a minimum—writes Prescott, the historian of Peru—they declared that “the god sat with all his light upon the column.” On the occasion of an equinox, “the pillar was crowned by the golden chair of the sun, and both then and at the solstices the columns were hung with garlands, and offerings of fruit and flowers were made, while high festival was kept throughout the empire.” Quito lies immediately under the equator, and here, says Prescott, the vertical rays of the sun threw no shadow at noon. For this reason the city “was held in especial veneration as the abode of the great deity.”

The stone with its shadow is familiar to us in the sundial by which we tell the time of day. The stick pointing at the sun has been developed into a somewhat more elaborate affair. Of all the innumerable instruments perfected by man, the oldest, it is said, was devised for the measurement of time. It is the astrolabe and appears to be of Greek origin. Did Apollonius of Perga invent it about the year 240 before Christ? Or was it invented B.C. 150 or thereabouts—by the greatest of Hellenic astron-

omers, Hipparchus? In any event the astrolabe—after more than 2000 years of use—is still valuable for educational purposes at Oxford.

It is a beautiful instrument, greatly valued by collectors, and consists of a circular disk that hangs steadily from a point on its circumference, or is set on a pedestal. A pointer with sights turns upon the center of the circle as an axis and is directed to the sun. There are wheels within wheels—exquisite in their precision—which can be adjusted like a slide rule according to the date, and the pointer thus corrected shows the time of day on the rim of the disk. It was by means of the astrolabe that the Wise Men who followed the Star read the celestial timepiece.

The makers of the calendar were thus compelled to rely on what the mathematician calls a first approximation of accuracy. And it was enough. Let us suppose that human history extends over 9000 years. Within that period the moon has only lost three seconds.

Not only are we able in these days to determine with extreme accuracy the motions of the celestial bodies; we can interpret those motions according to a simple and convincing formula. Every schoolboy knows that the earth turns on its axis and moves round the sun, which revolutions explain the appearance of the celestial sky.

But when was it that so simple a solution of an age-long riddle was announced? Not until the sixteenth century—about four hundred years ago. The makers of the calendar had no Copernicus to preface the way for them. Their minds were confused by the Ptolemaic system, according to which it was assumed that the sun and the stars in their courses move round the world. They saw in the heavens what we see. But they saw it, as we might say, backwards, nor could they discover any logical reason for what they saw. The very word that they applied to a planet means wanderer. A planet was a star that had lost its way.

APPROVAL FROM AMERICAN SCIENTISTS

From HENRY B. WARD

Secretary, American Association for the Advancement of Science

RESOLUTIONS passed by the Council of the American Association for the Advancement of Science at its St. Louis meeting on December 30, 1935, were as follows:

"WHEREAS this Association is already on record as approving a simplification of the calendar; and WHEREAS the League of Nations in 1931 proposed two plans for serious consideration: one, the 13-month plan; the other, the 12-month equal-quarters plan known as The World Calendar; and WHEREAS the 12-month equal-quarters plan has the advantages of a minimum of disturbance of the present system and greater flexibility in subdivision of the year; be it therefore

"RESOLVED, that the American Association for the Advancement of Science approves the 12-month equal-quarters plan for the simplification of the calendar."

EXCERPTS AND REVIEWS

France for Rational Plan

By PAUL LOUIS HERVIER

Secretary of the Bureau d'Etudes, Paris

(From an article in *Franco American Trade*,
October, 1935)

IN THE midst of all the scientific adaptations whereby man's daily life has been modified, the calendar is one of the rare antiquities which is still accepted with respectful resignation. Is it not surprising, almost inconceivable, that we should accept in 1935 the arrogant fancy of the Emperor Augustus, who in lengthening his month of August, upset the labors of Sosigenes, astronomer-collaborator of Julius Caesar?

Transportation, telephone, telegraph, radio and modern machinery have revolutionized all other old habits and customs, but we continue to support the consequences of that vain act.

To adapt the calendar to present conditions of existence is a wise reform. When the League of Nations a few years ago received an avalanche of calendar reform projects—mostly fanciful propositions, the very diversity of plans retarded immediate action. So many solutions gave rise to so many arguments that the entente appeared difficult to attain, and it became advisable to educate the public regarding the obscurities of a problem thus badly presented. But the League of Nations manifested its favor for two projects, the Comte proposal for a 13-month year and the alternative plan for a 12-month equal-quarter calendar. Although the former was supported by a powerful organization well versed in the art of propaganda, the 13-month plan fell far short of capturing unanimous approval. Nearly all French Chambers of Commerce rejected it.

But the 12-month revision presents advantages for all classes of society, providing a rational division the benefits of which are numerous and durable. The perpetual quality of the proposed calendar permits of improved comparisons of the results of effort and expenditure, of establishing improved budgets and statistics, of proceeding with exact comparisons between months, quarters and half-years. It

permits of better observations based upon experience. The most ardent advocates of this rational calendar are the educators of the young generations, professors and schoolmasters who immediately see the advantages of regular periods and schedules, avoiding those unforeseen "ponts" which now interrupt the course of studies.

The more we study the 12-month revision the more we must recognize the advantages which will accrue to the entire population. Among all the projects received by the League of Nations, none other presents such attractive and persuasive qualities.

Welcoming a New System

By WALDEMAR KAEMPFERT

Science Editor of the *New York Times*

PUBLIC opinion in favor of calendar reform is gradually becoming articulate. Some day civilized nations will have a calendar which will meet the requirements of business men, schools and the church, and which need not be referred to on some wall or desk in order to find out on what day of the week the new month or the new year falls.

But what calendar shall we adopt? An international league is all for the 13-month plan; The World Calendar Association is championing a scientifically constructed 12-month system. For a time it seemed as if the 13-monthers would win. Now support seems to be swinging to the 12-monthers.

The world is so wedded to a 12-month calendar that one based on any other division of the year could be adopted only if all countries were governed by Hitlers and Mussolinis who would agree to enforce it.

At a meeting held on October 4, the American Philosophical Society passed a resolution welcoming the adoption of the 12-month plan. The Philosophical Society is not alone in advocating The World Calendar. Bishop Manning saw to it that it was unanimously adopted by the General Convention of the Protestant Episcopal Church. The Chamber of Commerce of the State of New York has recently

endorsed it. The American Statistical Association voted 70 per cent in favor of it as opposed to the 13-month plan.

What Is "God's Time"?

By FLOYD J. MILLER

In the Royal Oak (Mich.) Tribune

LAST SUMMER I asked a visiting stranger whether his town ran on standard or daylight saving time; slow or fast time, as some say. He replied pertly: "We don't take to these newfangled ideas of monkeying with the clock. We stick to God's time."

Of course the stalwart old gentleman was wrong. Eastern Standard time is no more God's time than is daylight saving. But to him, time as he had always known it was God's time; and if the method used all his life was that established by some fallible human beings a few decades back, he was unaware of it. To him it was God's time and he was against any change.

That is the situation with regard to our present awkward calendar. The majority of people are content to ride along with it because it has always been that way. It never occurs to them that great inconveniences could be obviated by changing it and improving it.

Many leaders, however, have been working for several years to devise a better calendar and to sell the idea to the civilized world. The plan known as The World Calendar seems to me the most logical and convenient which has been offered. Regularity is what the calendar needs. If we could have our months the same length and arrangement each year, the holidays, our birthdays and other anniversaries would come in the same place each year. There is no apparent sense in the present arrangement.

Appeal by Radio

By COMMANDER STEPHEN KING-HALL

British Editor and Author

(From an Article in the London Radio Times)

HAVE YOU ever taken a calendar of the year and looked at it critically? Has it ever occurred to you that our present calendar is not fixed or perpetual? For example, your birthday or any other

anniversary falls on Monday one year, Tuesday the next year, and so on. The months contain from 28 to 31 days, and to remember which months have which days one has to learn a jingle or do sums on one's knuckles. The quarters of the year are not quarters at all, because the first contains 90 days, the second 91, and the third and fourth are each made up of 92 days. The first half-year is a fraud, because it contains two or three days fewer than the second half.

In short, the calendar which one would expect to be a neat, tidy and accurate way of dividing up time, is really a makeshift.

Most of us take our calendar for granted, but there are always active people in the world who see things. In 1923 the League of Nations started inquiring into the whole matter and in 1931 it held a conference attended by delegates from 44 nations. A special committee of the League was instructed to continue to enlighten public opinion on this social and economic problem.

For a Fixed Easter

By W. V. NOBLE

In the Manchester (England) News

FIX EASTER! It is a world-wide cry. It is a cry started hundreds of years ago, and which in recent years has been taken up by the Church and State, by business and educational authorities, and by the League of Nations. Yet Easter remains a movable feast.

The changing date of Easter, the most important festival in the Christian year, has caused international conferences—civil and ecclesiastical—and has even caused bloodshed; it has been the subject of a Parliamentary Act, has been referred to the Pope, and has a long history of argument.

As long ago as A.D. 325 plans were afoot to make Easter less capricious, and at regular intervals since then the question has been raised all over the world. But it has proved one of the most difficult questions which anybody has to face; so difficult, in fact, that although an Act has been passed in this country to fix the date it has not yet been enforced.

It is a question on which there must be the agreement not only of countries but of religious bodies.

CURRENT PRESS COMMENT

Stabilizing the Week

Providence Journal

The fact that Christmas and New Year were mid-week occurrences this season has been advanced as an argument in favor of the revised calendar advocated by The World Calendar Association. Under that plan, every Christmas would come on Monday and every New Year's on Sunday, an arrangement that seems desirable. It is the present hope to have this new calendar adopted by international agreement in time to be put into effect in 1939, when the first of January falls on Sunday.

Advocates of the 13-month calendar are still standing for their eccentric proposals. Of course the 12-month system advocated by The World Calendar Association is preferable to any other. Talk of an additional month is nonsensical.

Mexico's Position

Schenectady Gazette

Mexico's governmental approval of the 12-month World Calendar gives further impetus to the drive for reform of our present system and adds one more nation to the growing list of those favoring the change. The Mexican report finds that calendar irregularities hinder both government and business in Mexico, and declares that the proposed change to a unified 12-month plan would not disturb the present year.

In view of the notable advances made toward the goal during the past year, it will be interesting to note the progress which will come at the impending quadrennial session of the League of Nations section in charge of this matter.

Serious World Study

New York Times

In a discordant world the calendar is a "miracle of unanimity." All the peoples of the earth, whatever their local customs of reckoning, have to bring themselves in their relations with one another to the same planetary calculator and "common

arbitrator." Telegraph, telephone, radio and other means of swift communication are increasingly bringing all to one system of determining "how many days will finish up the year."

With all this unanimity there is a widespread demand for the improvement or reform of the present calendar. Two plans have been urged. It is worthy of special note that the American Philosophical Society, with a membership of 500 selected from among men of greatest eminence in science, letters and the liberal arts, has recently expressed its preference for the 12-month plan. The new year should give the proposed change its serious world study.

Vatican Viewpoints

Catholic Register

What calendar reformers would like to see would be, in the first place, a year in which movable feasts are fixed. The Catholic Church is interested, and there is no doctrinal reason why the dates of Easter should fluctuate. The Holy See takes a conservative attitude, wishing to be sure there is a universal desire for calendar reform before endorsing it. A very authoritative Catholic scholar, Abbot Cabrol of Farnborough Abbey, England, is supporting calendar reform and has presented a memorial to the Holy See. If a change is made, it will probably come into effect in 1939.

Leap Year Suggestions

Canadian Packet and Times

This is leap year. February will have 29 days. It may be the last time that the extra leap day will fall in February, if the League of Nations should succeed in bringing about calendar reform.

Calendar reform would give so many advantages, and is so comparatively simple and easy to carry out that it will be a pity if the League fails to get the necessary support. Yet we are warned by past experience that such reforms, no matter how rational and desirable, have to overcome a great deal of prejudice.

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EDITORS

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DEVELOPMENTS in the movement for a revision of the Gregorian calendar since the Fourth International Conference at Geneva in 1931 have been important and far-reaching. They will come up for official review and appraisal at the Fifth International Conference (of the League of Nations Commission on Communications and Transit), to be held early in the coming autumn.

Postponed from last year owing to the plans for internal reorganization of the Commission on Communications and Transit, the quadrennial conference this fall will find the forces supporting calendar reform reinforced by many important official bodies and governments.

These steps in progress have been chronicled from time to time by the Journal of Calendar Reform. Some of the most recent and most important of them are recounted in this issue,—particularly the definite pronouncement of the British Government in the House of Lords.

Organization of a new official German committee for the advancement of calendar reform has been going forward for some time, with the support of the Ministry of the Interior. In Latin America the coordination of many national groups is evidenced by the action of the recent Labor Conference in Santiago.

Progress in the United States during the past months has been chiefly in business, scientific, educational and religious groups. The action of the American Association for the Advancement of Science completes a long series of resolutions by scientific groups and gives the highest leadership to the movement for a new calendar. Educational leaders are preparing to give the support of the National Education Association to calendar reform and in religious circles, the American Section of the Universal Christian Council will probably present its official report to the government in Washington.

RECENT CALENDAR RESEARCH

Babylonian Time Measures

By J. B. PERRY ROBINSON

Secy. Rational Calendar Assn., London

RECENT British research in calendar reform has shed some interesting light on the origin of the observance of the seventh day as a day of rest, recreation and worship. In the history of Christianity, it is shown that Constantine the Great in promulgating the official religion for his empire ordained the seventh day as a day of rest, primarily for reasons of public health, public welfare and sound economics. Neither he nor any of the Early Fathers appear to have regarded this "Lord's Day" as in any sense a perpetuation of the Jewish Sabbath. To them it was a commemoration of the Resurrection, and this is why they chose Sunday, rather than the Jewish Saturday.

As for the Jewish observance, recent British scholarship has definitely set aside the tradition that it was kept continuously and uninterruptedly from the time of Moses. In fact, the ritualistic observance of the Jewish Sabbath had its origin during the Exile, about the Sixth Century, B. C.

The following summary of the results of recent research have been made public through the Rational Calendar Association by Professor Langdon of Oxford:

"The dominant religious influence throughout the whole of the Near East during the formative period of Hebrew civilization—from the establishment of the Kingdom until the post-exilic hierarchy of the Sixth Century—was that of Babylon," says Prof. Langdon. "The great Sumerian agriculture cults of Tammuz, crystallizing at Babylon at the end of the third millennium B. C., were the basis of Hebrew religious worship and observance as of the Greek and the Christian.

"In such agricultural religions the calendar is of greatest importance, and as the religions spread, calendar goes with them.

"It is undisputed that from the time of the Exile (586 B. C.) the Jews were using the Babylonian month-names (the Nisan series) in their calendar, together with the Babylonian method of computing the

year. The ancient Canaanite months which the Jews used were supplanted.

"The Babylonian months were lunar months, and one or two days were frequently intercalated after the four-week cycle in order to make each month begin with the first day of the new moon.

"The Babylonian religion developed a principle of periodic days on which, particularly, any work of healing and any work for profit or pleasure were discouraged. These days became fixed on the days 7, 14, 19, 21, 28 (and days 29 and 30 if intercalated), in every month, and in the nature of the observance of them, they bear a strong resemblance to Jewish Sabbath and Protestant Sunday.

"The probability that the Jews adopted this principle of 'rest days' at the same time as they adopted the Babylonian month-names is strengthened by the fact that they also derived the word 'Sabbath' from Babylon. In Babylon 'sabattu' did not mean a rest day but a day of division, e. g. the 15th day in the month, the day dividing the two halves of the month. Nevertheless this is undoubtedly the origin of the word 'Sabbath,' although at first the Jews themselves sometimes, as in Leviticus XVI, 31, used it in the Babylonian sense of the 15th day, as distinct from its subsequent meaning of the seventh day of rest.

"Assuming that the Jews adopted the Babylonian series of rest days, together with the Babylonian month-names and method of calculating the length of the months, it follows that the intercalated days necessary to make the months and the years begin with new moons must at the same time have periodically widened the interval between one Sabbath and the next to more than seven days."

World Impetus for Revision

By ANTON W. WILSON

(In *Scientia*)

PROPOSALS for a change in the calendar have acquired a keen interest to the civilized world since the conference of the League of Nations in 1931. Efforts

are being made to insure the enactment of the new calendar by 1939, when Sunday comes on January first. The next time when Sunday falls in this position will be in 1950, and there are many who think that so long a delay would be injurious.

The calendar has always been the object of proposals for change, and most of the revisions which have been adopted have been definite improvements. Reasons for another revision at the present time are that world conditions today are greatly different from those which existed formerly. Commerce, government and communication exact a greater uniformity and regularity in time division. Comparative statistics have greatly increased importance and are destined to aid future generations in directing the destinies of civilization. Even in religious matters, there are epochal changes: many religious feasts were formerly celebrated during the period of the full moon, so that the pilgrims traveling at night might be guided and protected by the moonlight. It was impossible then to adopt fixed dates for these feasts, but today the situation is entirely different.

The aims of the League's proposals for revision are to eliminate the defects of the present calendar and to establish a system which will give humanity the most fixed and permanent calendar which is possible.

Defects which are universally recognized are as follows: (1) Weekdays and their corresponding month-days vary from year to year; (2) Months are unnecessarily unequal in length; (3) No two months of the year are alike; (4) The quarters are unequal and dissimilar in make-up; (5) Months have not the same number of working days; (6) Comparative statistics for similar periods in different years are inaccurate and misleading.

In the present calendar, 28 varieties of months are possible.

An absolutely perfect calendar is mathematically impossible, but it is possible to establish one with fewer defects than the present one.

Any revision of the calendar should aim at bringing about its changes in the simplest possible way, with the least possible confusion and disturbance in the transition period. Revision is inevitable.

Jesuit Viewpoint

By THE REV. FELICIANO DE VICINAY, S.J.

(From *Digest of Synodal Commission*,
Peking, China)

IT would be quite simple to reform our present calendar in accordance with the 12-month plan known as The World Calendar. All that would be necessary would be to choose a year beginning with Sunday (1939, for example), and put the new calendar into effect. There would be hardly any perceptible interference with dates, but a great convenience would immediately result.

Studies of calendar reform available to Chinese students include the researches of Father Dugout, one of the victims of Nanking (March, 1927), who published a monograph in 1917. Father Dugout suggests a renaming of the months, to make the names internationally uniform, and recommends the Chinese method of naming the months according to their numerical position. A scholar named Reininghaus has suggested that all nations adopt the following nomenclature: Prim, Sekund, Terz, Quart, etc.

China is interested in calendar reform because of the country's existing calendar difficulties, as well as the fact that the nation includes more than 500,000,000 inhabitants, nearly a third of the world's population. The Chinese people have two calendars, their ancient lunar calendar, and a solar calendar that follows the astronomical months exactly. It is true that officially the lunar calendar was abolished with the coming of the republic, and replaced with the Gregorian system. The Nationalist government worked hard to put this substitution into effect, strictly forbidding the printing and sale of the old calendar and refusing legal recognition to documents and contracts dated according to the ancient system. But the lunar calendar is still imbedded in the customs of the Chinese people.

The proposed 13-month calendar would encounter unconquerable opposition in China. On the other hand, the revised 12-month system would not be opposed, but would actually form a basis for gradual and ultimate general acceptance.

FROM THE MAILBAG

I think the plan you are sponsoring is less radical than the other, and much more feasible of adoption. I think, also, that it has great advantage from a manufacturing, business, governmental and accounting standpoint, as well as private and personal viewpoints, so I heartily endorse the resolution of the Chamber of Commerce and the work you are doing in promoting it.—Gerard Swope, Pres., General Electric Co., New York.

The "12-month equal-quarter" plan can be adopted by the Churches quite readily.—Rev. H. L. Lonsdale, New York.

I am greatly interested and heartily in favor of your plan, advocating it whenever I have any opportunity to do so.—Prof. A. Toth, Lancaster, Pa.

The 13-month proposition I regard as so absurd as to be unworthy of serious consideration. Some years ago I talked with one of its advocates about it, when he visited the Comptroller's office of the Pennsylvania Railroad, with which I then held an official position, but his arguments did not appeal to me; nor could I see any particular business advantages that could not be equally well secured in other ways and without disturbing the accepted arrangement of the calendar.—H. B. Rumrill, Tredyffrin Observatory, Berwyn, Pa.

Although the 13-month plan has already created opposition to any plan, the opposition can be overcome by an intelligent exposition of the 12-month plan, the only sensible proposition looking to calendar reform.—Rev. C. L. Reynolds, Newark, N. J.

I am heartily in sympathy with The World Calendar plan.—Prof. G. A. Baitzell, Yale University.

At the annual meeting of the Florida State Pharmaceutical Association I presented a study on Calendar Reform.—T. R. Leigh, Chairman, Committee on Calendar Reform, Florida State Pharmaceutical Assn., Gainesville, Fla.

Your whole proposition is eminently reasonable and should be adopted. You can depend on my active support.—D. C. Kerr, Accountant, Salt Lake City.

The 12-month plan would make less confusion; few from the social standpoint would ever know the difference. Few people without a rhyme know now which are the 30 and which the 31 day months.—Rev. R. S. Wightman, Maywood, N. J.

I heartily approve of the new 12-month calendar since it leaves the year's quarters and halves intact, gives a fixed Easter, and would less disturb present conditions and calculations.—W. H. Fite, Mt. Vernon, Ky.

The sooner The World Calendar is introduced the better for Church, State and business.—Karl Kretzmann (Clergyman), Orange, N. J.

I am familiar with the project for reform of the Gregorian Calendar, and I have hopes that, *servatis servandis*, it may come to pass.—Ferdinando Bussolari, Archbishop of Modena, Italy.

As a student of calendar reform, I have used information from your Journal for public addresses.—C. D. Peake, Mission, Texas.

I should like to see any and all honorable means used to hasten the adoption of the 12-month plan. Nothing is to be gained by delay.—Rev. H. P. Metcalf, Madison, Ohio.

Very much in favor of World 12-month calendar.—C. J. Longbotham, Globe Oil & Refining Co., Minneapolis.

Hoping that your expectation of calendar reform will be fulfilled.—A. B. Kalian, Archbishop, Syrian Church, Baghdad (Iraq).

I formerly favored the 13-month plan, but it seems cumbersome. As I weigh the issue right now the revised 12-month ought to be considered.—Rev. P. E. Carsan, Struthers, Ohio.

In the matter of education and publicity the churches could have a valuable part.—Rev. E. C. Nielsen, Valley Falls, Kan.

I have been interested in calendar reform for many years and have long since decided against the 13-month calendar for scientific, commercial, social, and religious reasons.—Col. F. E. Johnston, Washington, D. C.

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